

VAX Software Source Book
Volume 2 Information Management to Utilities and Reference Guides
Third Edition, January 1986



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Volume 2

Information Management to
Utilities and Reference Guides

VAX

Software Source Book

Third Edition

digital

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Information Management



Black Star Publishing Company/Victor De Palma

1st MAP™

Operating System: VMS

Keywords: • Energy • Mapping • Petroleum
• Telecommunications

Distribution media: magnetic tape, RC25.

Working with Synercom's INFORMAP® II, 1st MAP can reduce front-end system design work considerably. The 1st MAP packages are made up of prepackaged, ready-to-use INFORMAP II routines and special productivity tools that allow the user to bypass the normal data base definition phase and to get started immediately. Each package is user friendly and includes predesigned schema, tables, menus, and documentation.

The schema is the blueprint that defines the information that will be in a data base, how different pieces of information are related, and how data is stored. Each 1st MAP package contains a schema that has been tailored to specific industries, including telephone companies, petroleum firms, natural resources agencies, and gas and electric utilities.

The Synercom system is table driven; the graphical appearances of the symbols, lines, and text used to represent the different elements stored in the data base are not hard-wired into the program logic of the data base. Instead, they are selected from line, symbol, and font tables at output time. The tables provide unusual flexibility in information display capabilities. The appearance of an element can be easily modified by changing tables or pointing to a different entry in a table. The menus in 1st MAP packages are laminated sheets containing the commands most frequently used in the Synercom system. The menus offer a quick, easy means to execute a command by placing the workstation cursor over the appropriate menu box and by pushing a button on the cursor. The commands have been positioned and color coded for easy location and use.

Price: \$15,000 – \$30,000

Contact: Sales Department
(713) 240-5000

SYNERCOM TECHNOLOGY, INC.

10405 Corporate Drive
Sugar Land, TX 77478

ACCENT R

Operating System: VMS

Keywords: • Data base management • Decision support
• Programming tools • Report writer

This implementation of a relational data base management system provides a complete development and control environment. This fourth-generation language permits immediate and direct access to data for strategic planning, decision support, and information management. ACCENT R offers immediate syntax analysis, editing capability, and a complete set of debugging tools for fast development of management information systems.

The program provides both a query and a programming language. With the nonprocedural query language, the user can selectively query the data base and produce ad hoc reports. The high-level structured programming language uses an approach that has already modeled the various components of data processing applications. Applications can be developed and tested in smaller modules, then tied together into a complete production system.

ACCENT R includes a quick report writer and a variety of interfaces. The quick report writer lets users design and produce customized reports without writing any program code. All code output by the report writer is immediately available to the user, so experienced programmers can edit a quick report writer-generated report program without starting from scratch.

The program interfaces to word processing, statistical analysis, financial modeling, an electronic spreadsheet, and graphics systems. Only one data base, central and accessible to all programs, needs to be maintained.

An optional host language is available. Applications written in COBOL, FORTRAN, or MACRO can easily be upgraded to use ACCENT R.

Price: \$40,000 – \$62,000

Contact: John Enyedy
(408) 257-7700

NATIONAL INFORMATION SYSTEMS

20370 Town Center Lane

Cupertino, CA 95014

ACT User Control, Accounting, and Facility Management Tool

Operating System: VMS

Keywords: • Billing • Cost accounting • Personnel

Distribution media: 9-track 800/1600 bpi magnetic tape, RX01, TU58 DECTape II cartridge.

This user accounting, control, and site management system supports a variety of accounting methods: cash-based operations (statements are sent and checks posted); purchase order-based operations (authorized users are limited to a certain amount of money and are automatically restricted when in excess); in-house resource chargeback (use is computed in artificial resource units (RU)), and at a later fiscal date, the

value of the RU is determined and applied retroactively to all use; and project accounting (users bill their work to different projects without logging in again).

The system automatically collects and maintains use information. ACT notifies the manager and users when account parameters are exceeded. The system can optionally turn off those users. The user has access to all data about his or her own account; the manager can access all data and help information. Detailed use reports are generated daily and automatically; summary information and statements are generated monthly and automatically. A system-specific command file containing postings and other commands can optionally be automatically executed on a daily and/or monthly basis. ACT provides simple commands for adding new users (creating a UAF entry, creating a directory, and adding in other billing information) and deleting old ones.

Full support is provided for multi-CPU configurations, either clusters or DECnetted.

Price: \$3900 - \$8000

Contact: B. Mossberg
(213) 837-8339

INTERNATIONAL STRUCTURAL ENGINEERS, INC.
P.O. Box 241740
Los Angeles, CA 90024

Action List

Operating System: VMS

Keywords: • Architecture • Civil engineering
• Project management • Scheduling

This system, used by project managers for expediting, progress chasing, and document control, complements Project Software's forward-looking planning and cost control system, the Project Cost Model. Action List is used to establish schedules itemizing information outstanding, drawing requirements, or materials procurement programs. Those define what needs to be done, by whom, and when. Action List is then updated regularly and used for progress chasing, recording what has been done, and highlighting critical items needing action. The system ensures that decisions are taken on time and that drawings, specifications, and other documents are completed and distributed when required.

Action List includes a flexible report writer that allows users to select what information is presented on reports.

Project Software has subsidiaries and distributors in the United Kingdom, United States, South Africa, Australia, and other parts of the world. In the United States, contact John Gillespie (212) 624-2587, Project Software Inc., 257 Hicks Street, Brooklyn, NY 11201.

A version of this product is available for the PDP-11 computer.

Price: £1500 – £3000

Contact: Martin Barnes, Director
061-439 6639 or Telex: 666650
PROJECT SOFTWARE LTD.
Foden Lane, Woodford
Stockport, Cheshire SK7 1PT
United Kingdom

ADABAS (VMS)/NATURAL (VMS)

Operating System: MicroVMS, VMS

Keywords: • Data base management • Data dictionary

Memory required: 0.5 to 1MB shared code. Distribution medium: magnetic tape.

This high-performance relational data base management system processes a high volume of transactions against very large data bases in a multiuser production environment. ADABAS (VMS) includes automatic restart and recovery after a hardware or operating system software failure, save/restore, high reliability and integrity, transaction processing, a high-level language call interface, on-line data base administration utilities, a data dictionary, floating-point data types, and compatibility with mainframe ADABAS.

ADABAS (VMS) includes Software AG's fourth-generation information processing system NATURAL (VMS), which allows users to create applications for information entry, retrieval, updating, and reporting without the need to code in traditional procedural programming languages. NATURAL (VMS) provides forms generation on VT100/VT200-type terminals, interactive editing and correction of NATURAL programs through an editor that is a superset of the standard DIGITAL full-screen editor, relational access to data through data-independent user views, and compatibility with mainframe NATURAL.

Quantity discounts, VAXcluster pricing, and OEM pricing are available.

These products are available outside the United States through affiliates and distributors.

Price: \$65,000 – \$85,000

Contact: David Keller
(703) 860-5050
SOFTWARE AG
11800 Sunrise Valley Drive
Reston, VA 22091

ADE (Application Development Environment)

Operating System: MicroVMS, VMS

Keywords: • Application development • Office systems
• Programming tools • Report writer

Distribution media: 9-track 1600 bpi magnetic tape, RX01, RX50, TU58 DECTape II cartridge.

ADE provides information management for office professionals. ADE users — managers, administrators, and clerical personnel — can create and manage information files and produce a variety of reports. ADE provides an on-line tutorial, extensive help messages, and a self-prompting command structure. ADE also allows users to produce and use simple applications without learning programming techniques or languages.

Refer to SPD #25.76.xx when requesting further information on this product from your local DIGITAL sales office.

A version of this product is available for the PDP-11 computer.

Price: \$995 – \$2700

Contact: Consult your local DIGITAL sales office (see Introduction).

ADT-DMS (Data Management System), Version 2.0

Operating System: VMS

Keywords: • Data dictionary • Data entry

This end user-friendly data management system is menu driven and data dictionary-based for maximum flexibility and is based on RMS for compatibility and transportability. ADT employs fourth-generation language and data management techniques and provides data entry, data maintenance, on-line inquiry, ad hoc report generation, and automatic screen generation.

ADT is appropriate for almost all information management environments.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Randolph J. Reece
(303) 987-1001

INTERACTIVE SOFTWARE SYSTEMS INC.
P.O. Box 27466
Denver, CO 80227

Advance

Operating System: VMS

Keywords: • Education • Fund raising • Mailing lists
• Report writer

This institutional advancement application supports all aspects of nonprofit fund raising and constituency management. Advance is based on VAX Information Architecture, is written in COBOL, and uses RMS, DATATRIEVE, Common Data Dictionary, and TDMS.

Price: \$85,000

Contact: R. Anthony Allison

(617) 890-2105

BUSINESS SYSTEMS RESOURCES

303 Wyman Street

Waltham, MA 02154

AFMEP (Association Friendly Membership Processing)

Operating System: ULTRIX-32

Keywords: • Financial analysis • Query facilities • Recruiting
• Statistics

This menu-driven system for membership personnel is updated on a formatted screen and has daily cash reports (trial balance, certification, and final); identification cards; renewal notices; address label selection and generation; membership and unrenewed membership listings; support for divisions and chapters; reports on deferred income, rebate, and statistics (membership and transactions); a transaction list; ad hoc reporting; and query.

Various types of membership are supported, and rates are stored in a table to facilitate changes. Two rates can be stored and used, based on effective date.

The update program validates input as it is entered and provides help. A normal renewal requires the operator to enter only the member number and the amount paid.

Although flexible, the AFMEP system has controls built in to prevent problems. For example, the user cannot begin processing transactions for a new date until the previous cash has been balanced.

AFMEP also provides additional security with passwords that allow some users to only query the data base and permit other users to update or request reports.

Price: \$10,000 - \$20,000

Contact: Raymond G. Kennerly

(301) 441-1390

KENNERLY ASSOCIATES, INC.

6302 Merna Lane

Lanham, MD 20706

Ambase

Operating System: VMS

Keywords: • Application development • Data base management
• Query facilities • Report writer

Memory required: 1MB.

Ambase is a comprehensive, interactive, multiuser, user-oriented data base management system and application development tool. Features include report, screen, and code generators and a user interface, Amwriter. Ambase shortens programming time through code standardization, and the code generator's automatic documentation features simplify program modification. Ambase's extensive prototyping capabilities shorten development time.

A version of this product is available for the PDP-11 computer.

Price: \$10,000 - \$75,000

Contact: Marketing Department
(502) 491-9820 or 1-800-626-6268
AMCOR COMPUTER CORP.
1900 Plantside Drive
Louisville, KY 40299

Analect Decision Support System

Operating System: MicroVMS, VMS

Keywords: • Data base management • Decision support
• Financial management • Sales and marketing

Analect is a systems building tool for financial, sales, production, and marketing applications. Analect's powerful internal data base management system can consolidate information into meaningful data bases necessary for any corporate department. The data is organized in a relational data base management system.

Analect provides multidimensional data analysis, worksheet modeling and what-if computations, forecasting, multivariate analysis, arima modeling, a report writer, a programming language for custom applications, and presentation-quality business and custom graphics. Multiple interfaces, on-line menus, help aids, and a report writer support users. Sophisticated routines to analyze marketing, financial, or production trends are built into the system. In addition, Analect provides links to popular microcomputers and spreadsheets.

Analect offers the following integrated and self-contained modules: Multidimensional Analysis, Forecasting, Reporting and Applications Building, RIM (relational data base management system), and Business and Custom Graphics.

Price: \$4000 - \$125,000

Contact: Henry Abelman
(212) 425-2665
DIALOGUE INC.
19 Rector Street
New York, NY 10006

APECS/8000

Operating System: ULTRIX-32, VMS

Keywords: • Project management

APECS/8000 is an integrated project management system for multiproject environments ranging from 50 to 32,000 activities. Designed for the non-data processing professional, the system can be operated in menu mode for the novice and command mode for the expert user. APECS/8000 features customizable menus and security levels, management graphics, relational DBMS user commands, project summarization, and reporting. Analysis capabilities include CPM/PERT, resource under-/overutilization, cost over-/underrun/variance, what-ifing, earned value, custom applications, and DOD cost schedule control system criteria reporting.

APECS/8000 can be operated in an on-line real-time environment or in deferred mode.

Price: \$37,500 - \$150,000

Contact: Glenn O. Gumley
(313) 769-6800

AUTOMATIC DATA PROCESSING
175 Jackson Plaza
Ann Arbor, MI 48106

ARCHON: ADMS (Association Data Management System)

Operating System: VMS

Keywords: • Data base management • Mailing lists
• Recruiting • Word processing

ARCHON: ADMS keeps accurate records on membership management, meetings and conventions subscriptions, political action, and library management. The software combines data from different departments and provides new information, allows on-site customization, and shares data with other systems, such as financial, word processing, and fund raising, to automatically produce letters to members.

Information on this product is also available from Larry L. Eastland, (703) 893-4494, QUODATA Corporation, McLean Office Centre, Suite 614, 6845 Elm Street, McLean, VA 22101.

A version of this product is available for the PDP-11 computer.

Price: \$8900

Contact: Ila Sunshine
(203) 728-6777
QUODATA CORP.
266 Pearl Street
Hartford, CT 06103

ARCHON: QDMS (Quodata Data Management System)

Operating System: VMS

Keywords: • Data base management • File management
• Report writer

QDMS allows instant access to vital information by anyone, at minimal cost. Not so much a solution as a tool, QDMS is the result of many years of experience integrating the needs of users with computer power to produce solutions that are efficient and easy to use. New insights on data manipulation and programming techniques produce a comprehensive information management system that is flexible and reliable. Features include minimum hardware cost, instant reports, a generalized report generator, multikey and update capabilities, English-language dialog, video screen creation, global updating, on-line or batch control, flexible data entry, fast sort, validity checking, linked file data structure, field-by-field protection, and multiple data types.

A version of this product is available for the PDP-11 computer.

Price: \$19,500

Contact: Ila Sunshine
(203) 728-6777
QUODATA CORP.
266 Pearl Street
Hartford, CT 06103

Audit

Operating System: VMS

Keywords: • Audit • Cost accounting • Operations
• Security

This sophisticated software security and documentation tool for VMS and RSTS/E operating systems allows you to create a complete audit trail of the activities of any terminal. Audit is thorough and automatic and enables any user to create simplified session documentation from his or her own terminal.

A version of this product is available for the PDP-11 computer.

Price: \$2500

Contact: Carolyn Clyde
(801) 224-5306
CLYDE DIGITAL SYSTEMS, INC.
P.O. Box 4500
Provo, UT 84603-4500

AUTOPRO (Automatic Programming)

Operating System: VMS

Keywords: • Data base management • Data dictionary
• Programming tools • Report writer

Distribution media: magnetic tape, RL02, RX50.

The AUTOPRO data base management system allows both experienced and inexperienced users to automatically generate comprehensive systems in a simple, interactive terminal session. For complicated management information requirements, the user can generally use AUTOPRO to create a model of system requirements, including data base creation, data entry and file maintenance functions, and report generation. The professional programmer may then extend the model, using the facilities of AUTOPRO to eliminate most programming.

Many applications can be completed in one to four hours. The user uses the Data Base Manager to define data elements and the Screen Manager to create a screen to add, modify, and delete entries in the new data base. The user can specify any number of screens for data base maintenance and inquiries. The Report Writer allows the user to produce reports as needed. For word processing, the user moves information from the data base into the list processing option of the word processing system.

The Data Dictionary is the foundation for AUTOPRO. All data base creation and maintenance automatically update the data dictionary, ensuring accuracy and consistency of all data resources. The Data Dictionary supports application development for the Screen Manager, Report Generation, and Word Processing integration. The data base creation facilities are menu driven and include HELP facilities.

The Data Dictionary provides a centralized resource for your data, whether applications are developed through AUTOPRO, DIBOL, COBOL, or DATATRIEVE. This centralized facility provides control of all your corporate data, giving managers, secretaries, and application development staff easy access to those resources. DIGITAL's CDD is maintained automatically.

A version of this product is available for the PDP-11 computer.

Price: \$1250 - \$10,000

Contact: E. Jackson Smith
(301) 296-9032

SMITH, ABBOTT, AND COMPANY, INC.
300 E. Joppa Road
Baltimore, MD 21204

Base SAS® Software

Operating System: VMS

Keywords: • Data base management • Programming tools
• Statistics

The basic program product in the SAS system provides data retrieval and management, programming, and statistical and reporting capabilities, including line printer graphics. More than 75 easy-to-use procedures allow users to obtain results quickly; applications programmers can take advantage of a full line of programming tools, including the

1000 Information Management

new SAS macro facility. The base SAS product is used for such diverse applications as capacity planning, market research, and quality control.

Price: Available upon request

Contact: J. Gail Spain
(919) 467-8000

SAS INSTITUTE INC.
Box 8000, SAS Circle
Cary, NC 27511-8000

BASIS

Operating System: VMS

Keywords: • Data base management • Query facilities
• Text management

This data management system retrieves information and data and manipulates both textual and numeric data. Users can define new applications and begin loading data within a few days, without the assistance of computer programmers.

Searches are made by means of an inverted index or a sequential search of the data records. Proximity searching, index browsing, numeric range searching, and prefix and stem searching are performed, as are hierarchical and universe searches and a full complement of Boolean logic on retrieved document sets.

The system provides on-line input verification and editing or batch input of data records. On-line sort and report modules are provided for on-line or off-line report definition and to read and create non-BASIS-related files. Formatted screens with complete validation are provided.

Extensive on-line help facilities are available, and an easy-to-use end-user query language is provided with every installation. The system provides complete security at the data base, index, record, and data-element levels. Source code and a complete library of BASIS utilities are provided with every installation.

BASIS supports bibliographic, full text, and numeric data bases for library, litigation, scientific, manufacturing, research, publishing, and other application areas. During the past 10 years of development and enhancements, BASIS has evolved into an internationally recognized DMS with more than 250 sites worldwide.

Price: \$15,200 +

Contact: BASIS Coordinator
(800) 328-2648

BATTELLE SOFTWARE PRODUCTS CENTER
505 King Avenue
Columbus, OH 43201-2693

BRS/SEARCH

Operating System: UNIX* (System III, System V), VMS

Keywords: • Data base management • File management
• Library science • Text management

Memory required: 512K minimum. Distribution medium: 9-track magnetic tape.

This full text information retrieval package, written in C, retrieves unstructured textual information. Every word becomes an index term with complete Boolean and positional operators. Output from editors or word processors can be processed automatically, each word being added to the index. Fields can be either variable or fixed, with numerics capable of being searched as values as well as words positionally.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$19,995 – \$39,995

Contact: Software Sales
(800) 235-1209

BRS
1200 Route 7
Latham, NY 12110

CAIRS (Computer-Assisted Information Retrieval Systems)

Operating System: VMS

Keywords: • Data base management • Data entry
• Office systems • Text management

Memory required: 150K.

CAIRS is a highly versatile, powerful, and flexible free-text information retrieval package. Its modular design means that extra facilities may easily be added.

Data is stored in variable-length fields. Powerful search facilities enable the user to easily and rapidly search the index file by using keys. Help and menu tasks are available to aid inexperienced system users.

The data base design allows the user to choose the record structure, data validation, and type of indexing to be used. Data validation is by means of the thesaurus and can be used to control data language during both entry and searching.

Extremely powerful report-generation capabilities are included in all the packages, and the output-format tables are easy to set up. Complete security throughout the data base ensures that low-level users cannot access confidential data.

The original source code is RTL/2, and media distribution is object code — normally, on 1600 bpi tape.

1002 Information Management

A version of this product is available for the PDP-11 computer.

Price: £1400 – £30,000

Contact: Dr. Dee Marrable
(0372) 376761 ext. 250

LEATHERHEAD FOOD RESEARCH ASSOCIATION
Randalls Road
Leatherhead, Surrey KT22 7RY
United Kingdom

Calendar Management

Operating System: VMS

Keywords: • Data base management • Office systems
• Scheduling

Distribution medium: 9-track 1600 bpi magnetic tape.

This automated time management system allows users to maintain a personal calendar of workday activities, to schedule appointments and meetings with other Calendar Management users, and to maintain a tickler list. Other features include attendance confirmation of a meeting, checking confirmations of other attendees, meeting cancellations, calendar view, a tickler file, and an on-line help facility. Each feature can be printed for a specified day or a week.

Refer to SPD #A0.52.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$1500 – \$4000

Contact: Consult your local DIGITAL sales office (see Introduction).

CDD (Common Data Dictionary)

Operating System: MicroVMS, VMS

Keywords: • Data dictionary • Language enhancers
• Language processors
• VAX Information Architecture

The VAX Common Data Dictionary provides a single logical data dictionary for a VAX/VMS or MicroVAX/MicroVMS system. CDD contains definitions for VAX ACMS, VAX DATATRIEVE, VAX DBMS, VAX Rdb/VMS, VAX TDMS, VAX COBOL, VAX BASIC, VAX DIBOL, VAX FORTRAN, VAX C, VAX Pascal, and VAX PL/I.

This logical dictionary is built from one or more physical dictionary files, thus allowing users to access one clusterwide dictionary as well as individual dictionaries for each processor. Users can now take full advantage of VAX/VMS clusters with regard to dictionary usage. Within this dictionary, the CDD maintains a hierarchical directory of the user's data descriptions; multiple versions are supported.

The CDD provides security based on its hierarchical directory. Each directory and data description can have its own Access Control List. Each entry in that list specifies a class of user and the type of access allowed to the directory or data description. A user class is defined by selecting the UIC, user name, password, and terminal class parameters.

The dictionary can be simultaneously accessed and updated by any number of concurrent users. VAX CDD uses the VAX/VMS Lock manager to make certain that users do not interfere with one another.

Refer to SPD #25.53.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$130 - \$1980

Contact: Consult your local DIGITAL sales office (see Introduction).

CDM (Clinical Data Management)

Operating System: VMS

Keywords: • Data base management • Data dictionary
• Data entry

This system facilitates interactive data entry and editing for people with no previous computer skills. The user first writes a simple program that defines the data dictionaries of the data files to be entered. That program is compiled to create control files that enable the package's utility programs to be customized. Data may be entered, edited, and reviewed, using the interactive data entry utility. Prompting messages obtained from the data dictionaries guide the user through each data form. One or more data values may be entered in free format between prompting messages. Entry errors can be detected and corrected immediately. Lists of remaining edit checks can be generated for subsequent verification and correction. Data points that are not entered are automatically assigned missing value codes. The user may alter the order of data entry to skip missing entries or change previously entered values. An indexed file structure allows rapid and convenient access to any record in each file. Interactive interfile edit checks can enforce consistency between files in a multifile data base. Other features include interactive help messages, relational edit checks, date variables, and automatic case conversion. CDM data files may be accessed as sequential files with fixed data formats. Documentation files that summarize the data dictionary and specify the column location and format of each variable in the file are generated automatically. The data dictionaries are maintained as separate control files. A utility to load existing sequential files into a CDM system is provided.

Price: \$500

Contact: William D. Dupont
(615) 298-2711

CDM SOFTWARE CO.
906 Cantrell Avenue
Nashville, TN 37215

CLIO Database Management System

Operating System: VMS

Keywords: • Data base management • Programming tools

In use at more than 200 installations worldwide, CLIO is a transportable DBMS for minicomputer and mainframe systems. CLIO supports a completely layered information organization, with concurrent on-line and batch data base access. CLIO includes host language interfaces for COBOL, PL/1, FORTRAN, and assembler programs. This system's virtual space architecture provides unparalleled capabilities for data structuring, data base modification and growth, and data compression. CLIO's security facilities permit protection down to the field level. A comprehensive set of support tools, including a fully integrated data dictionary, report writer, query language, data manipulation language, and text editor, are provided. Transaction journalization and data base rollback recovery facilities ensure data integrity across system or program restarts.

Price: \$40,000 – \$80,000

Contact: George Finckenor
(212) 696-3600

ADVANCED COMPUTER TECHNIQUES

16 East 32nd Street
New York, NY 10016

Command

Operating System: VMS

Keywords: • Data base management • Data dictionary
• Query facilities • Report writer

Written in VAX-11 BASIC, Command is an AI-like report generator. An effective, easy-to-use management tool, Command enables the casual user to query the data base and to easily format information into reports. Command features on-line help, ability to look at samples and to edit, and choice of output.

Price: \$10,000

Contact: Curt Riendeau
(603) 880-6785

COMPUTER MANAGEMENT DYNAMICS, INC.

29 Riverside Drive
Nashua, NH 03062

Command Center™

Operating System: VMS

Keywords: • Decision support • Project management

Memory required: mainframe, 2MB; PC, 256K minimum.

This executive information system (EIS), written in PL/I and C, resides on both mainframe and desktop computers. The system extracts, compresses, and delivers a broad range of internal and external information; tracks exceptions or variances from budgets, benchmarks, or expectations; and monitors and highlights critical factors.

The Pilot Command Center distributes processing between a VAX mainframe computer and IBM PCs. The IBM PCs operate in a keyboardless environment, using a mouse or touch. The PCs offer superior displays, quick response, and a highly interactive capability, and the mainframe provides the data base and system logic controller capabilities.

Price: \$75,000 – \$150,000

Contact: Maurice Giguere

(617) 350-7035

PILOT EXECUTIVE SOFTWARE

40 Broad Street, Second Floor

Boston, MA 02109

CORTEX Application Builder

Operating System: VMS

Keywords: • Application development • Data base management
• Development tools • Programming tools

Designed to handle the rapid pace of change in today's business data base environment, the CORTEX Application Builder features data base management and security, screen formatting and screen data entry, an integrated data directory, an application programming language, end-user facilities, sort/merge/consolidation, report generation, and data base journaling. The Builder also includes simple query, statistical, and report-writing commands. Those facilities provide data base access for ad hoc information requirements.

The optional CORTEX Application Accelerator produces multiuser, shared, reentrant task images for high-performance applications.

Price: \$10,800 – \$25,200

Contact: Lynn Hearl

(617) 894-7000

CORTEX CORP.

128 Roberts Road, Technology Center

Waltham, MA 02154

CYX Transaction Processing System

Operating System: VMS

Keywords: • Communications • Data base management
• Networking

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This complete system creates an efficient environment for transaction processing. Designed for large-volume, multiuser, on-line applications, the system provides communications management for 3270-type BSC terminal networks and data base management for high on-line performance. The system features a layered architecture and modular design and supports a set of optional products, including IBM Reach Through, DECnet Reach Through, Report Writer, Security Control, Electronic Mailbox, Text Filing, Centralized Program Error Reporting, and Data File Maintenance.

CYX Transaction Processing manages data bases to the maximum limits of the hardware, can increase throughput by an average of 30% to 100% over general data base management systems, and provides duplicate recording, journaling, automatic transaction rollback, and full restart/recovery. CYX supports computer networking and distributed processing and allows batch processing, program development, and system maintenance functions to process simultaneously with on-line operations.

A version of this product is available for the PDP-11 computer.

Price: \$30,000 - \$45,000

Contact: Barbara Gurstelle

(612) 835-4884

CYTROL, INC.

4620 West 77th Street

Edina, MN 55435

Data Boss/4

Operating System: VMS

Keywords: • Application development • Data base management
• Development tools

This fourth-generation data base management system, a complete application development and productivity tool, is written in BASIC Version 2. Data Boss/4 is completely compatible with RMS and other DIGITAL-supplied utilities and greatly enhances the flexibility and ease of use of RMS.

Data base definition is accomplished interactively: Data Boss/4 requests a definition for each field, and the user responds with the field name, field, and screen attributes. An integrated set of facilities is accessed through a tailorable menu system. User-written programs can retrieve, manipulate, and update data. Those user programs can also be included in the menu system for easy user access.

Easy-to-use screen formatting plus highly sophisticated data entry and keystroke-saving techniques are an intrinsic part of Data Boss/4. VT100 compatibility also ensures high data entry productivity.

Security through menu-selection criteria and user profiles controls the use of Data Boss/4 and its host of utilities. Searches are accomplished through an easy-to-use, fill-in-the-blanks style and take advantage of Boolean logic and relational operators. Searches, such as "begins with," "contains," and "ends with," are also available.

A version of this product is available for the PDP-11 computer.

Price: \$10,000 - \$25,000

Contact: John H. Wright
(305) 652-1710

FLORIDA COMPUTER, INC.
99 N.W. 183rd Street, Suite 126
North Miami, FL 33169

Data Designer™

Operating System: VMS

Keywords: • Data base management • Simulation

This interactive software tool for logical data modeling helps collect and organize data about "user views," the information required by various user groups and applications. Each user view is described and synthesized into the collection of previously entered views. Inconsistencies are pinpointed and resolved. The end product is a third normal-form, nonredundant data model that supports the described data requirements. The model can then be implemented, using a DBMS or file-access method, thus ensuring a data base design that can serve multiple applications with minimal maintenance.

If Information Planner™ is also used, Data Designer shares and expands the information stored in the encyclopedia. Thus, top-down and bottom-up approaches to information planning and modeling are consistent.

Data Designer's interface uses full-screen menu and editing techniques. Extensive on-line help facilities are available, including instructions in the use of the program and discussion of the methodology.

Price: \$21,000 - \$55,000

Contact: Barbara K. Smith
(313) 971-5363

DATABASE DESIGN, INC.
2020 Hogback Road
Ann Arbor, MI 48104

Datapparel System 11

Operating System: VMS

Keywords: • Inventory • Order entry • Production control

Memory required: 2MB minimum.

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This system was designed to offer apparel manufacturers and importers a multicompany, multidivisional, and multiwarehousing system. The decision to use both COBOL and VAX was prompted by a need for a management information system that offers increased performance coupled with unlimited growth potential.

System 11 offers truly on-line, real-time data entry, maintenance, and display programs for order processing, credit processing, allocation, sales reporting and analysis, production control, cut and sold reporting, customer and salesperson analysis, gross profit by style and customer, invoicing, credit memos, fabric and trim projections, piece goods inventory, finished goods inventory, raw materials, costing, accounts receivable, accounts payable, and general ledger.

Datapparel can provide software support by telecommunicating directly with the user's system and quickly resolving any problems. By accessing extensive on-line documentation through the Help key, all users' questions are answered directly on the CRT, eliminating the need to page through huge volumes of manuals.

Datapparel supplies complete installation, program maintenance, and consulting services. Education seminars are also included as a by-product of the Datapparel software maintenance program. As an OEM distributor for DIGITAL, Datapparel offers the apparel manufacturer a single-source vendor to whom all questions can be directed. Should there be a hardware problem, DIGITAL has support centers in every major city throughout the world.

Datapparel's System 11 can be licensed on a modular basis.

Price: \$45,000 - \$250,000

Contact: Scot Siegel

(213) 645-9061

DATAPPAREL, INC.

6101 W. Centinela Avenue, Suite 330

Culver City, CA 90230

DATATRIEVE

Operating System: MicroVMS, VMS

Keywords: • Data base management • Query facilities
• Report writer • VAX Information Architecture

VAX DATATRIEVE, a query and report system for the VAX/VMS and MicroVMS operating systems, provides a uniform access method for data stored by RMS, VAX Rdb, and VAX DBMS files on VMS. Using VAX DATATRIEVE, a novice or an experienced user can retrieve or modify data without considering the underlying storage method or physical location of the data. VAX DATATRIEVE provides a tutorial mode for the novice and an Application Design Tool for the more experienced user who may want to define data structures.

Information can be displayed and printed as a report or as a simple table. Information can also be displayed with user-defined VAX FMS and VAX TDMS forms or presented graphically on a VT125 or a VT240. Hard copy of the graphic display is also available. DATATRIEVE is also an efficient way to access information stored on other VAX, PDP-11, or DECSYSTEM-20 systems linked by DECnet.

VAX DATATRIEVE can be used interactively to retrieve, modify, store, or delete data with a simple set of commands. Frequently used combinations of commands can be stored as named procedures and invoked by name. Programs written in other VAX languages can call VAX DATATRIEVE, allowing them to be independent of underlying data storage methods and physical location.

VAX DATATRIEVE includes commands to store, examine, modify, and delete definitions in the VAX Common Data Dictionary. The system can also use definitions stored by other VAX layered products, such as the VAX DBMS Data Definition Language (DDL) or the VAX Rdb DDL.

Access to remote VAX systems is provided by VAX DATATRIEVE, provided that it has been installed on the remote system. DATATRIEVE uses the local data dictionary on the remote system to divide processing between the host and the remote system to minimize traffic over the communications link.

A highly structured nonprocedural language, VAX DATATRIEVE provides automatic access optimization, data type conversion, and data validation. Looping and control structures can be combined and nested to create complex, powerful commands.

Refer to SPD #25.44.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$660 – \$9900

Contact: Consult your local DIGITAL sales office (see Introduction).

DBMS (Data Base Management System)

Operating System: MicroVMS, VMS

Keywords: • Compilers • Data base management
• Data dictionary • VAX Information Architecture

Distribution media: 9-track 1600 bpi magnetic tape, RA60, RK07, RL02.

VAX DBMS is a multiuser general-purpose CODASYL-compliant data base management system that runs under the VAX/VMS and MicroVAX II/MicroVMS operating systems. VAX DBMS is used for accessing and administering data bases ranging in complexity from simple hierarchies to complex networks with multilevel relationships. VAX DBMS supports full concurrent access in a multiuser environment without compromising the integrity and security of the user's data bases. VAX DBMS is based on the March 1981 Working Document of the ANSI Data Definition Language Committee.

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VAX DBMS features include full concurrent access capabilities in a multiuser environment; record locking and journaling; automatic transaction and verb rollback; multiple-data base support (one or more data bases for a process); integration with the VAX Common Data Dictionary (CDD) facility; and schema, subschema, storage schema, and security schema data definition languages (DDLs).

VAX DBMS also includes FORTRAN Data Manipulation Language (FDML); a high-level call interface for VAX languages that adhere to the VAX calling standard; automatic subschema definition extraction from the CDD for BASIC, BLISS, COBOL, DIBOL, MACRO, Pascal, and PL/I when using the high-level call interface; an easy-to-use utility command language; an interactive data base query utility with video display of subschema structure diagrams on VT100-compatible terminals; on-line data base verification in concurrent, protected, and exclusive modes; off-line full and incremental data base backup and restore; and the ability to redo a sequence of committed transactions (roll forward). In addition, VAX DBMS offers an Initial Load utility, an Unload utility for data extraction, and functionality for data base restructuring with Unload/Load.

Additional features include BATCH RETRIEVAL ready mode, data base snapshots for increased concurrency in large retrieval applications; space area management pages to improve data base free-space search performance; Boolean record selection expression with index optimization on FIND and FETCH DML statements; data compression of data items and data base key pointers; fragmented records, which allow large records to span multiple data base pages; simple restructuring without reloading a data base; and sorted sets implemented with B-trees, with prefix and suffix compression for sort keys.

Refer to SPD #25.48.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$2640 – \$19,800

Contact: Consult your local DIGITAL sales office (see Introduction).

DM (Data Base Management System)

Operating System: VMS

Keywords: • Data base management • Data dictionary
• Report writer

This complete, sophisticated dictionary-driven data base management system allows for hierarchical, network, and relational data models. The DM software supports both high-level user-friendly interfaces for end users and host language interfaces for programmers. The system's inverted-list-access method of indexing allows indexes to be easily optimized for on-line retrieval. Any record may be accessed by using a primary key that uniquely identifies that record. DM handles long textual elements and supports variable-length data elements, variable-

length records, and immediate on-line updating. A user can search for specific words and word patterns and can perform word proximity searches.

The DM system provides a Report Writer (DMRW) that handles long textual elements. A terminal-support module permits terminal-oriented applications to be easily implemented. Terminal screens can be used to review or modify several records at once. Overall, DM provides flexibility, simplicity, and high performance in data base management.

Price: \$29,000 +

Contact: BASIS Coordinator
(800) 328-2648

BATTELLE SOFTWARE PRODUCTS CENTER
505 King Avenue
Columbus, OH 43201-2693

Document Management System

Operating System: ULTRIX-32, VMS

Keywords: • Data base management • Data entry
• Documentation • Query facilities

This data base management system maintains indexes to business records stored on paper, microfilm or microfiche, compact laser disks, or a combination of media types. The user can create and maintain multiple data bases for different business file systems on a single computer system. Each data base has a user-defined 80-character fixed document descriptor. The descriptors are cross-referenced to one or more storage location files; one storage location file serves each media type. To look up a business document, the user enters a document description; the system responds with the appropriate storage location or locations. Document descriptors can be moved from one media type to another.

Programs supplied with DMS include key input, laser input, retrieve, purge, and supervisor. DMS is menu driven and provides help functions to allow new users to configure their own data bases. Reporting functions of DMS include the user productivity report, purged data analysis, the input productivity report, input data analysis, the retrieval productivity report, and the storage location utilization report. DMS incorporates a security system that allows the system supervisor to control user access by data base and program.

DMS has an interface to desktop bar-code label printers and to a computer-driven microfilm camera that can translate optical bar-code labels. The interfaces create the index on microfilm without any key entry. DMS also automates the document retrieval process by providing interfaces to automated microfilm and microfiche retrieval devices, as well as to the Digital Compact Disk Read Only Memory (CDROM).

DMS is written in C and can be transported across computer hardware/software systems.

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Price: Available upon request

Contact: Russel Nutter
(313) 964-2220

BUSINESS ORIENTED SUPPORT SYSTEMS, INC.
1100 Buhl Building
Detroit, MI 48226

Drawing Register

Operating System: VMS

Keywords: • Architecture • Civil engineering • Graphics
• Project management

This system allows a register to be maintained of all drawings produced and issued on a project. In addition, the system produces a complete history of any drawing or group of drawings on request. A report can be produced of the current status and revision of each drawing so that the project management team can ensure that all organizations working on the project are using the latest issue of drawings.

Drawing Register contains a list of people and organizations that can receive drawings for a project. Each is given a reference code by the user. To issue drawings, the user needs only to enter the recipient's code with the drawings and quantities. The system produces a print delivery note that lists all the drawings required and accompanies the drawings to the recipient. The system can at any time report the recipients of any drawing and, conversely, the drawings issued to a recipient.

Project Software has subsidiaries and distributors in the United Kingdom, United States, South Africa, Australia, and other parts of the world. In the United States, contact John Gillespie (212) 624-2587, Project Software Inc., 257 Hicks Street, Brooklyn, NY 11201.

A version of this product is available for the PDP-11 computer.

Price: £1500 - £3000

Contact: Martin Barnes, Director
061-439 6639 or Telex: 666650

PROJECT SOFTWARE LTD.
Foden Lane, Woodford
Stockport, Cheshire SK7 1PT
United Kingdom

DRS

Operating System: VMS

Keywords: • Data base management

This sophisticated general-purpose multiuser data base management system can be operated in batch or interactive mode in dedicated and time-sharing environments. Designed to solve large, complex, and diverse data base problems, DRS is particularly well suited to text-handling applications. Data bases can be created and modified quickly and easily using the data base builder (DBB) facility. DRS provides an

integrated query and update capability for selection, sorting, computation, and basic reporting of numeric, textual, and date information. Extensive recovery and security features are also provided.

A report-writer facility provides a procedural language to design reports that may require multiple sort break levels; rolling and cross-foot totals; complex computations; heading, footing, and page control; numeric editing; text string manipulation; and data translation.

A combination screen builder and applications generator enables users to develop their applications efficiently and simply. Forms are easily produced that allow the user to inquire, add, modify, delete, or browse through records and fields in the data base. A host language interface allows applications written in higher-level languages to access selected information from a data base.

Line diagrams, pie charts, and bar charts can be generated. Twenty graph formats, more than 50 colors, and more than 100 graphics device drivers are available for this utility.

A version of this product is available for the PDP-11 computer.

Price: \$15,000 +

Contact: Jim Meidel, Sales Manager
(609) 799-4600

ADVANCED DATA MANAGEMENT
15-17 Main Street
Kingston, NJ 08528

EMS (Environmental Effluent Management System)

Operating System: VMS

Keywords: • Data collection • Environmental • Nuclear

This system combines data acquisition with analysis, record keeping, and reporting. Liquid and airborne radwaste (in continuous or batch releases) can be tracked from front-end raw data analysis, to discharging the effluents, to recording and reporting the release data. Through job streams that prompt the operator for necessary information, daily EMS operation accommodates novices. EMS automatically processes the effluent release, updates the data base, and outputs reports. EMS aids in generating release permits; checking on-line technical specification limits; calculating dispersion and technical specification doses; calculating radiation monitor setpoint; projecting 31-day, quarterly, and yearly doses; and producing semiannual effluent reports.

This software assists in meeting the requirements set forth in 10 CFR Part 20 and Appendix I to 10 CFT Part 50, using methods recommended in Regulatory Guides 1.21, 1.109, 1.111 NUREG-0133, and NUREGS-0472/473. The software uses a powerful relational data base with an embedded query language for easy customer modification.

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Price: \$20,000 – \$40,000

Contact: Terry Gahl

(404) 434-9889

NUCLEAR DATA, INC.

2734 South Cobb Boulevard

Smyrna, GA 30080

EVANAC — Project Accounting System

Operating System: VMS

Keywords: • Billing • CAD/CAM • Operations

• Project management

This comprehensive accounting package records elapsed time for any user-initiated program on the computer. When used with the Inter-graph Command Environment (ICE) and graphics, EVANAC also provides an automatic backup of accessed design files and optimal disk utilization by reducing each design file to its minimum size. EVANAC records total sign-on time, as well as the intermediate time of any activity specified by the system manager. Custom tailored to each user's needs, EVANAC will prompt, verify, and record all information applicable to client billing, such as employee number, job number, client name, and so forth. EVANAC also records the design file name while in graphics and the input and output file names for utility operations. Application programs can be tracked and billed and, with a FORTRAN subroutine interface, can even be recorded and billed by number of internal operations.

In the event of a system crash, the accounting system automatically terminates the recording of any active task. At reboot, the system prompts for the reason for the crash and maintains a log of total downtime and reasons.

The accumulated accounting data is periodically backed up and processed into a common DMRS data base. Standard time reports by employee, by drawing, by client, and so forth are provided with the system. General-purpose report-writing techniques allow complete flexibility in the generation of custom reports.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Debra P. Bressler

(713) 266-0000

EGT, INC.

11011 Richmond, Suite 700

Houston, TX 77042

File-it!™

Operating System: ULTRIX-32, UNIX* (Berkeley)

Keywords: • Data base management • Forms management

File-it! allows a computer novice to maintain, modify, add, and retrieve vital information. File-it! provides quick access to phone lists, mailing lists, calendars, financial records, or other information that needs to be managed. File-it! provides the following features:

- **Interactive data base creation and modification:** The data is described to File-it! through an interactive format. After the field names, data types, and field lengths have been entered, File-it! builds the data base schema and creates a default form for data entry and inquiry.
- **Context-sensitive help facilities:** A help screen provides extensive reference information and instructions about the work in process.
- **Form modification:** File-it! has options to speed data entry. A range of data validation and verification options, such as default values, prompts, and legal ranges, can be assigned to any input field.
- **Data inquiry:** File-it! displays only the information that is relevant to the user's request. Information can be selected on the basis of one or more specific values, a range of values, or a value that closely approximates the specified value.
- **Data access and retrieval:** File-it! uses the powerful C-ISAM™ access method for retrieving data base information.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$895 - \$3750

Contact: Sales Department
(415) 424-1300

RELATIONAL DATABASE SYSTEMS, INC.
2471 East Bayshore Road, Suite 600
Palo Alto, CA 94303

FINGRAPH

Operating System: VMS

Keywords: • Graphics

Memory required: 256K.

This powerful, innovative software, requiring 2855 disk blocks, expands the power of your applications by transmitting information graphically to help you make decisions and operate more efficiently. You set up charts once, and FINGRAPH automatically updates the information from your application, spreadsheet, or data base or updates data manually to supplement operational data. FINGRAPH charts use data consistent with tabular reports and display the data on your terminal, using the unique slide-show feature, or produce them quickly from your plotter or printer.

A version of this product is available for the PDP-11 computer.

Price: \$995 – \$3000

Contact: Ronnie Jarett
(217) 793-0884
GRAPHIC M*I*S, INC.
960 Clock Tower, Suite G
Springfield, IL 62704

FIS (Fiche Inquiry System)

Operating System: VMS

Keywords: • Query facilities • Report writer

This on-line inquiry system provides for viewing, searching, examining, and selectively printing reports or parts of reports. Reports can be stored through an archived procedure with parameterized retention periods. For reports not generated by the VAX, a facility is provided to retrieve the data from magnetic tape. FIS enables the user to access reports by facility, report number, and date; scroll reports on the screen; search for one or more reports for a selected character string; temporarily save and recall screens; save a print-selected portion of a report; and archive reports daily, weekly, monthly, or quarterly.

Price: \$8000

Contact: Joseph B. Paperman
(212) 943-0171
ULTIMATE DATA SYSTEMS LTD.
26 Broadway, Suite 1257
New York, NY 10004

Flow Gemini Environmental Information System

Operating System: VMS

Keywords: • Data base management • Environmental
• Health care

This comprehensive, flexible system facilitates environmental surveillance and waste-disposal activities to help preserve the environment and to protect the public health. Major design features include flexibility and user independence in changing the structure of the data base and the standard Flow Gemini reports.

Price: \$90,000 – \$120,000

Contact: Wanda Rappaport
(703) 893-5915
FLOW GENERAL INC.
7655 Old Springhouse Road
McLean, VA 22102

FRIS (Fund-Raising Information System)

Operating System: VMS

Keywords: • Education • Fund raising • Mailing lists
• Report writer

This donor management system for fund-raising institutions features the ability to record extensive biographical and gift information, a solicitation tracking system, gift and pledge processing, and a sophisticated gift-acknowledgment letter generator. Keyed files provide fast record retrieval, and an internal security system protects data from unauthorized users. User-defined tables and detailed edit tests ensure uniform data and accuracy.

Several utility reports, such as phonathon cards, pledge reminders, and mailing labels, enable FRIS users to generate ad hoc reports. Hard-coded reports include CFAE, matching-gift claims and payments, and biographical changes. The file inquiry function permits interactive queries; the mass-update function facilitates global maintenance to data.

Price: \$38,000

Contact: Peter J. Watkinson
(617) 890-2098

INTERACTIVE MINICOMPUTER SYSTEMS, INC.
303 Wyman Street, Suite 203
Waltham, MA 02154

Fundraiser

Operating System: MIIS/MAGIC

Keywords: • Data base management • Fund raising
• Mailing lists • Word processing

This system uses visual display terminals and letter-quality printers to help automate the development office. The staff has complete control over the donor/prospect list and the processing of gifts. The system prints gift receipts and acknowledgment letters automatically, tracks restricted donations, and prints transmittal reports for the fiscal office.

Fundraiser helps run effective money-raising programs. By analyzing gift data, the system reports those appeals, phone-a-thons, or campaigns that have been most successful. The system provides on-line biographical data and unlimited processing capabilities. Fundraiser can be installed on a minicomputer or accessed through the Impact Systems computer center in Cambridge, Massachusetts.

A version of this product is available for the PDP-11 computer.

Price: \$25,000

Contact: John S. Mills
(617) 863-8070

IMPACT SYSTEMS, INC.
83 Hartwell Avenue
Lexington, MA 02173

GRS (Generalized Reporting System)

Operating System: VMS

Keywords: • Report writer

GRS is an advanced report writer and query language that enables the user to prepare reports from virtually any data base, using an English-like language. GRS is compatible with the accounting and manufacturing systems from NCA, Transcomm, Interactive Management Systems, Amcor, Martin Marietta, and others.

Designed for nonprogrammers and programmers, GRS users need no specialized technical skills. Powerful data retrieval, analysis, and formatting capabilities allow users to prepare simple reports with one statement and to prepare complex reports involving multiple input files in a matter of minutes. GRS works with non-RMS files and data base systems.

A version of this product is available for the PDP-11 computer.

Price: \$4800 - \$6500

Contact: Ruth L. Simon, Marketing Manager
(212) 972-1860

ENTERPRISE TECHNOLOGY CORP.

305 Madison Avenue
New York, NY 10165

Handle List

Operating System: ULTRIX-32, UNIX* (Berkeley)

Keywords: • Data base management • Forms management
• Office systems • Telecommunications

Handle List permits user-defined data bases of information. Simple forms fill-in templates are used to streamline information into the data bases. Information can be selectively sorted and merged within letters, lists, and so on. List processing, telemarketing, and any type of information management are quickly and easily generated with Handle List. As with all Handle products, Handle List is completely function key driven and fully integrated with other Handle products.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$240

Contact: Karan Kauppila
(916) 583-7283

HANDLE CORP.

P.O. Box 7018
Tahoe City, CA 95730

IAS (Interactive Simulation System)

Operating System: VMS

Keywords: • Data base management • Decision support
• Forecasting • Simulation

IAS, written in FORTRAN-77, is a comprehensive data base-oriented dialog system for econometric modeling and corporate planning. IAS covers all phases of model building: convenient format-free data input, powerful data manipulation and transformation facilities, and all standard estimation methods, including ordinary least squares, 2-stage least squares, instrumental variables estimation, ridge regression, polynomial distributed lags, robust estimation techniques, non-linear least squares, and estimation of simultaneous equations. The system also handles regression tests for autocorrelation, heteroscedasticity, functional form and structural breaks, and diagnostic checks; a wide range of time-series methods (estimation of AR, MA, and ARMA processes; estimation of spectral and cross-spectral densities; Box-Jenkins estimation; and forecasting of univariate time-series models); the X-11 method for seasonal adjustment; as well as random-number generators for the most important distributions. The modeling process is supported by facilities that store equations and models, simulation and forecasting techniques for large-scale models, and powerful table and report generators.

Price: \$950/yr – \$7500/yr

Contact: Karl Zolles

(222) 56 36 01

INSTITUTE FOR ADVANCED STUDIES

Stumpergasse 56

Vienna A-1060

Austria

IDA™ (Interactive Data Analysis and Forecasting System)

Operating System: VMS

Keywords: • Financial analysis • Financial planning
• Statistics

IDA is a general-purpose conversational statistical package that emphasizes the tools associated with regression analysis and related model-building techniques. IDA offers comprehensive statistical capabilities, including summary and 1-sample statistics, tabular analysis, probability calculations and simulations, regression analysis, and time-series analysis, including Box-Jenkins estimation and forecasting. In addition, the system has extensive data-handling facilities. IDA is virtually self-teaching, with proven business applications in forecasting sales or cash flow, operations and quality control, and inventory management. Elaborate error detection and recovery codes,

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internal help files and documentation, bilevel prompts, and other features of IDA are designed specifically for the user's convenience. Applications for IDA include business management, trend analysis and forecasting, handling of seasonal data, and more.

Price: \$3000 – \$6000

Contact: Susan Phelan
(312) 329-2400

SPSS INC.

444 North Michigan Avenue
Chicago, IL 60611

IMPRS

Operating System: VMS

Keywords: • Data base management • Language processors
• Programming tools • Query facilities

This relational data base software package allows both technical and nontechnical users to establish and maintain relational data base systems, interactively generate sophisticated reports, and write fourth-generation high-level programs to support application systems. IMPRS increases programming productivity through a complete data-manipulation language. IMPRS also supports several query language interface modules that allow nontechnical users to browse through the data base and quickly produce reports. IMPRS is fully documented and comes with a full complement of utility programs to support the data base and to provide additional flexibility to the user.

A version of this product is available for the PDP-11 computer.

Price: \$1000 – \$20,000

Contact: Elvin E. Smith or Forrest E. Weddle
(913) 782-8544

RUF CORP.

1533 E. Spruce
Olathe, KS 66061

INDENT (Initial Data Entry)

Operating System: VMS

Keywords: • Data base management • Data entry
• Forms management

Distribution media: magnetic tape, RX02.

These FORTRAN programs facilitate the initial entry of data from original documents. Data fields are entered from a user-defined form, in the order of their occurrence. A record is produced with variables in any desired order to facilitate data processing. Fields common to all records in a file produced during a session need be entered only once. Each variable field on the record may be independently right or left justified, and the remainder of the field is filled by a blank or character specified by the user.

INDENT runs in minimal space, allowing numerous data entry terminals to operate. For example, on a PDP-11 computer with 64K memory running RT-11, INDENT will run in the foreground while the keypad editor (KED) runs or FORTRAN program development takes place in the background. INDENT works best when large amounts of numeric data must be entered but the system editor requires the keypad for editing functions. INDENT frees the keypad for numeric input.

INDENT programs define output record format, allow format review prior to initiating a session, and accept and display data from the resulting files in their order of entry.

A version of this product is available for the PDP-11 computer.

Price: \$600

Contact: Mark Troy
(808) 842-8641

INDENT

1290-d Maunakea Street, Suite 133

Honolulu, HI 96817

INFO™

Operating System: VMS

Keywords: • Application development • Data base management
• Decision support • Documentation

Developed by Henco, Inc., this software system automates clerical functions, managerial decisions, and application development. With its English-like commands, INFO can serve any level of personnel with minimum training.

The system's relational data base management capabilities use logical names and numbers to link files, as in manual systems. INFO's relational structure readily adapts to changing information requirements. The system uses direct-access files and Indexed Sequential Access Method (ISAM) files, not including segmented keys, variable-length records, and individual key lengths greater than 64 bytes. The user has no need to load existing data into an INFO data base. Complex data structures can be accommodated by simultaneously joining up to 10 files, using flat or hierarchical relationships.

DIGITAL distributes this software product under license from Henco, Inc.

Refer to SPD #A0.23.xx when requesting further information on this product from your local DIGITAL sales office.

INFO™ is a trademark of Henco, Inc.

Price: \$14,700

Contact: Consult your local DIGITAL sales office (see Introduction).

InFoCen

Operating System: MicroVMS, VMS

Keywords: • Data base management • Graphics
• Report writer

Memory required: 1.5MB. Distribution medium: 8-track 1600 bpi magnetic tape.

InFoCen is a set of fourth-generation relational (select/project/join) data base management system tools featuring statistics, a report writer, five security levels, an intelligent interface, electronic messages, a performance monitor, data base administration, concurrency, recovery, a macro process builder, export/import and forms utilities, a FORTRAN subroutine library, alias tables, and color graphics. InFoCen, written in FORTRAN, uses bit mapping, binary threaded trees, and hashing to manipulate data into "run-time subsets." The product's nonstructured query language enables the user to construct up to three lines of free-form, continuous query commands that can be linked by macros for a virtually automatic method for manipulating and reporting data.

Price: \$5000 - \$39,000

Contact: Ron Knox

(303) 223-2722

3CI

155 West Harvard Street

Fort Collins, CO 80525

INFODAPT™

Operating System: VMS

Keywords: • Data base management • Earth resources
• Mapping

Memory required: 1MB. Distribution media: magnetic tape, RC25.

INFODAPT, written in FORTRAN-77, is an open-architecture interface between INFORMAP® II and terminals and workstation manufactured by other companies. INFODAPT allows the user to perform functions typically associated with a full-function mapping workstation at a low-cost terminal, such as those in the Tektronix 4100 series. Through INFODAPT, desk-top terminals can be used for data base administration functions, such as system generation, facetization, drawing storage, and deletion.

Price: \$20,000

Contact: Sales Department

(713) 240-5000

SYNERCOM TECHNOLOGY, INC.

10405 Corporate Drive

Sugar Land, TX 77478

INFORMAP II™**Operating System:** VMS**Keywords:** • Data base management • Graphics • Mapping
• Report writer

Distribution medium: magnetic tape.

The foundation of Synercom's product line, INFORMAP II is a layered VAX-based software product that lets Synercom customers build their mapping systems in phases. Each of the product's three levels adds more sophisticated mapping functions to the previous level.

The first-level INFORMAP II product is INFOMAPPER, which provides the functions required to build, store, maintain, and retrieve a cartographic-quality mapping data base. INFOMAPPER is the foundation for the second- and third-level INFORMAP II products, which can be added when Synercom customers need the capabilities provided by those more advanced products.

INFOMAPPER is a real-time software system offering integrated graphics and basic data base management capabilities. The software's graphics capabilities convert map or drawing information to digital format. The software's data base management capabilities provide the means by which information within a map sheet or drawing is stored and organized and the means by which the records, information layers, symbols, and other data within each map sheet are managed and interrelated.

The second-level INFORMAP II product is INFOMANAGER, an enhanced data base management software product that enables the user to more effectively structure and manipulate the mapping data base and consequently store data more efficiently, retrieve it more quickly, and manipulate it in more ways than provided through INFOMAPPER alone. The increased speed and functionality become more important as the amount of information in the data base increases. INFOMANAGER also provides boundary rectification, advanced permanent storage edit capabilities, advanced coordinate geometry constructs, and polygonal processing capabilities.

The third-level INFORMAP II product is INFOQUEST, an interface to reporting software designed for selecting information from various sources, rearranging it, viewing key elements in depth, and creating management reports with minimal data processing support.

Volume purchase discounts are available.

Price: \$40,000 – \$140,000**Contact:** Sales Department

(713) 240-5000

SYNERCOM TECHNOLOGY, INC.

10405 Corporate Drive

Sugar Land, TX 77478

Information Planner™

Operating System: VMS

Keywords: • Data base management • Data dictionary
• Decision support

This interactive software tool for enterprise modeling supports strategic information systems planning and a variety of planning methods, including IBM's BSP, the Critical Success Factors approach, and James Martin's Strategic Data Planning Methodologies. The tool assists in the creation and analysis of a model of the business enterprise: its objectives, organization structure, locations, activities, information needs, and the relationships among these features. The tool then helps define a collection of development projects and prioritizes them by their contribution to business objectives. The model is stored in a data base or encyclopedia for further analysis and for future updating.

Information Planner's user interface uses full-screen menu and editing techniques. Extensive on-line help facilities are available, including instructions in the use of the program and discussion of the methodology.

Price: \$15,000 – \$25,000

Contact: Barbara K. Smith
(313) 971-5363

DATABASE DESIGN, INC.
2020 Hogback Road
Ann Arbor, MI 48104

INFORMIX®

Operating System: ULTRIX-32, UNITY, UNIX* (Berkeley)

Keywords: • Application development • Data base management
• Forms management • Report writer

This system provides a set of comprehensive tools for application development and the utilities to create and maintain data bases. INFORMIX's capabilities include comprehensive menu creation, screen-oriented data entry, query by forms and powerful ad hoc queries, full-featured report writing, and a C language interface.

The Dbmenu menu-creation facility allows user customization of INFORMIX's menu-driven environment. Single- or multilevel menus can be created quickly and easily through interactive screens.

Informier, the powerful interactive query language, can be used to extract information in the most relevant fashion; create and store the results of arithmetic, logical, or aggregate operations; and perform global data management functions.

Ace is INFORMIX's nonprocedural report-writing language. With Ace, nontechnical personnel can extract, manipulate, format, and display data from one or more INFORMIX files.

Perform adds custom screen generation, data entry facilities, and query-by-forms capabilities to INFORMIX. A screen created with Perform can display and update fields from multiple data base files. Queries based on a specific value, a range of values, or a wildcard designation can be easily performed with a minimum of keystrokes.

ALL-II, the C language interface, consists of a library of C routines that perform the data base operations required by programmers. ALL-II routines can be incorporated into any C program through simple call statements that set up and perform queries.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$3000 - \$12,000

Contact: Sales Department
(415) 424-1300

RELATIONAL DATABASE SYSTEMS, INC.
2471 E. Bayshore Road, Suite 600
Palo Alto, CA 94303

INGRES

Operating System: MicroVMS, ULTRIX-32, UNIX* (Berkeley), VMS

Keywords: • Data base management • Data dictionary
• Forms management • Query facilities

This full-function multiuser relational data base management system, combined with a Visual Programming™ applications development system, provides an English-like data base language, QUEL. QUEL includes complete facilities — for data definition, data protection, and data manipulation — that let users view data as tables. QUEL can be used interactively or embedded in BASIC, C, COBOL, FORTRAN, and Pascal source code through a preprocessor called EQUEL (Embedded QUEL).

INGRES includes specialized data indexing and automatic optimization algorithms that provide high-performance access to on-line data bases. Full services for data validation, concurrency control, security, and transaction processing are also provided. INGRES automatically stores and maintains information about a data base and related applications in an Integrated Data Dictionary. In addition, through INGRES/NET,™ users and applications can gain transparent access to remote data bases located on any computer in a network.

INGRES integrates several application development tools. Each tool employs a unique Visual Programming user interface based on forms management. INGRES/FORMS provides forms definition and editing, INGRES/QUERY offers an interactive query-update system, INGRES/REPORTS™ includes both a visual report editor and report-writing language, and INGRES/GRAPHICS™ provides a decision

graphics subsystem. In addition, INGRES/APPLICATIONS-BY-FORMS™ offers an application development environment for prototyping or building production systems rapidly without coding.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: \$2000 – \$40,000

Contact: Peter R. Tierney
(415) 845-1700

RELATIONAL TECHNOLOGY, INC.
2855 Telegraph Avenue
Berkeley, CA 94705

INMAGIC

Operating System: VMS

Keywords: • Law • Library science • Query facilities
• Report writer

Memory required: 256K RAM.

This text retrieval and indexing system, written in FORTRAN, supports a full nested Boolean query language and a report generator that lets you create your own formats for printing search or sort results. Prompting screens facilitate data entry and modification.

Two industry-specific overlays are designed for use with INMAGIC. INCASE and BIBLIO, for the litigation support and corporate library markets, respectively, consist of record designs and printing formats that provide a ready-made framework for data base development.

TESTMAGIC, the test program, consists of full documentation and an INMAGIC version that allows you to build a 50-record data base. TESTMAGIC is available for \$65.

A version of this product is available for the PDP-11 computer.

Price: \$11,500 – \$13,500

Contact: Nancy Bergeron
(617) 661-8124

INMAGIC INC.
238 Broadway
Cambridge, MA 02139

Intelligent Text Management System™

Operating System: VMS

Keywords: • Artificial intelligence • Data base management
• Library science • Text management

This artificial intelligence system offers users an English dialog with computer data on any subject. Users can retrieve information on any stored subject directly, without relying on specialists to search for them. The software tells users which documents or files or portions of documents or files are the most relevant to their search. Authorized personnel can query the data base in conversational English at their

terminals and receive an instant response in English, despite the size of the data base. This instant response is possible because the system automatically indexes and files each document by subject or subjects and does not have to read each document in the data base for every user inquiry.

The system:

- Offers menu-driven format with queues and responses in everyday English
- Understands each user's vocabulary, linguistic style, and external view of the data base by means of a customized, comprehensive, and easily expandable vocabulary
- Automatically indexes new documents as they are added to the data base and indexes and retrieves subdocuments
- Researches a user's request by subject matter
- Automatically files electronic mail and archives documents according to predefined criteria

Price: \$75,000 – \$100,000

Contact: Earlene Busch
(303) 442-6224

INFORMATION ACCESS SYSTEMS, INC.
1823 Folsom, Suite 101
Boulder, CO 80302

Job Cost Accounting

Operating System: VMS

Keywords: • Cost accounting • Payroll • Project management
• Report writer

This module tracks costs, open purchase orders, accounts receivable, work in process, and client payments and is designed for professional services firms, government contractors, and manufacturers who need to track job costs. A detailed report with a line item for each charge, job summary, labor allocation and productivity, daily hours (certified payroll), and customer-designed reports is provided.

Job Cost Accounting features up to 1000 subdivisions for each job to report costs by department, job phase, and so on; multiple methods for computing overhead and for determining billing rates; a variety of report versions, with multiple selection criteria for determining report contents; table-driven report formats that can, in many cases, be changed with no reprogramming; and a multiple hierarchy for subtotals.

Job Cost Accounting is available separately or as a part of an integrated package with payroll, accounts receivable, accounts payable, purchase order, and general ledger. Custom tailoring is available. Complete maintenance and support are available under contract. On-site installation and training, a bill of materials processor, and inventory control are optional.

A version of this product is available for the PDP-11 computer.

Price: \$8000 +

Contact: Janna McMillan

(617) 275-5810

BREUER & CO.

54 Middlesex Turnpike

Bedford, MA 01730

KDSS (Key-to-Disk Data Entry System)

Operating System: VMS

Keywords: • Data entry • Office systems

Distribution medium: 9-track 800/1600 bpi magnetic tape.

This system permits a portion of PDP-11 or VAX resources to be used as a data entry system with capabilities comparable to those of the most advanced stand-alone multiterminal key-to-disk data entry systems. KDSS can run concurrently with other applications on the system and thus may interest present or prospective RSTS/E, RSX-11M, or VMS users who have such key-to-disk data entry requirements in addition to the other applications that they wish to run. KDSS data entry and verification take place under control of formats, written in a high-level declarative language, specifying screen layout, cursor positioning, field edits (an extensive set of intrafield, interfield, and inter-record edit capabilities is available), balancing and totaling, dup and autoincrement fields, and so on. KDSS also has output reformatting facilities, as well as facilities for permitting a supervisor to monitor the data entry process through batch status and operator status displays. The performance-critical portions of KDSS are implemented in assembly language as shared code.

A version of this product is available for the PDP-11 computer.

Price: \$9000

Contact: Martha Scott

(617) 861-0670

EVANS GRIFFITHS & HART, INC.

55 Waltham Street

Lexington, MA 02173

KES (Knowledge Engineering System)

Operating System: VMS

Keywords: • Artificial intelligence • Data base management
• Decision support

KES is an environment and support tool for implementing interactive expert systems that enable users to make decisions about knowledge-intensive problems. KES is domain independent; it is not restricted to any one knowledge area, because the system and the knowledge base are strictly separated. In order to build an expert system using KES, the domain expert need only create a file that contains the necessary

expertise to be used in solving a problem. No knowledge of programming or artificial intelligence techniques is required. KES accepts the knowledge base file and converts it into a form suitable for combination with the expert system software. This separation of the knowledge base and the system software allows the development of a variety of knowledge bases, each of which can be used by the system to produce operational expert systems.

KES has three separate subsystems, each with its own method of representing knowledge and making inferences. The production rule subsystem has knowledge represented as conditional rules that are used by a consequent-driven rule interpreter. In the hypothesize-and-test subsystem, knowledge is represented by descriptive frames; the inference engine is based on the minimal-set cover theory and can evaluate multiple hypotheses simultaneously. In the Bayes subsystem, the knowledge is in tables of prior and conditional probabilities that are used with Bayes Theorem to calculate a new set of probabilities.

Among the advantages of KES are its ease of use for both a knowledge base author and an end user, its domain independence, its choice of inference mechanisms, and the fact that it is fully supported and documented and has a proven record in a variety of applications.

Price: \$2000 – \$25,000

Contact: Andrew E. Copeland
(703) 276-7910

SOFTWARE ARCHITECTURE AND ENGINEERING,
INC.

1500 Wilson Boulevard, Suite 800
Arlington, VA 22209

KEYWORD Information Manager

Operating System: VMS

Keywords: • Data base management • Data dictionary
• Personnel • Report writer

This package for commonly needed information storage and retrieval functions is oriented toward groups of information that can be accessed in various ways. KEYWORD can be used in prospect management to maintain detailed information on customers and prospects and to retrieve data on only some prospects. KEYWORD can keep a variety of information on each of a number of current projects, along with historical data for past projects, and can also maintain comprehensive personnel records.

Each KEYWORD information group can have numeric, alphabetic, and other data fields, which may be defined and changed by the user. The user may use up to 1800 characters to describe each group, along with a file text for each group of unlimited size. In addition, each information group may have several groups of up to 100 user-defined keywords, each of which can be used to access the group, and up to several hundred numeric fields that can be used to access the group.

1030 Information Management

Reports, like the data base, can be tailored to your needs. You get only the information that you want, in the format that you want.

A version of this product is available for the PDP-11 computer.

Price: \$4000 +

Contact: Janna McMillan
(617) 275-5810
BREUER & CO.
54 Middlesex Turnpike
Bedford, MA 01730

KnowledgeMan

Operating System: ULTRIX-32

Keywords: • Data base management • Decision support
• Management • Office systems

This integrated information management system, designed for creating powerful decision-support systems, handles data management, ad hoc inquiries, spreadsheet analysis, statistical analysis, screen management, report forms management, and structured programming. The system offers an unlimited number of open files, with a maximum of 255 fields for each file and 65,535 characters for each field. Eighty-four hundred lines of on-line help text provide immediate assistance to the user. Security capabilities include password checking, control of file and field access for read and write, and data encryption. The system can execute DOS commands and other programs from within KnowledgeMan.

Optional components are available for multicolor business graphics (K-Graph), full-screen text processing (K-Text), report generation (K-Report), forms painting (K-Paint), and mouse implementation (K-Mouse). Those components are fully integrated so that any capability can be exercised within any KnowledgeMan session. Local area network versions of KnowledgeMan and its options, as well as a run-time version of the system, are also offered. An easy-to-use 350-page book, *Discovering KnowledgeMan*, is also available for beginners.

Price: \$500

Contact: KnowledgeMan Marketing Representative
(317) 463-2581
MICRO DATA BASE SYSTEMS, INC.
P.O. Box 248
Lafayette, IN 47902

Leverage

Operating System: UNIX* (Berkeley, System III, System V),
VENIX

Keywords: • Data base management • Data entry
• Menu handlers • Text management

This general-purpose, inexpensive data base system gives users easy access to advanced UNIX* capabilities and is useful on any UNIX* machine. Leverage provides full-screen data entry and retrieval, record selection, and mail-merge capabilities and serves as a menu-driven front end to standard UNIX* utilities. Leverage is well suited for use in mailing-list and document-production applications, particularly in the publishing and legal markets.

Leverage stores its data in standard UNIX* text files with variable-length fields and records, thus providing sophisticated report generation using the UNIX* awk, sort, tbl, and troff programs. Leverage deals with one data file at a time, so it lacks the relational or hierarchical structures of true data base management systems. In applications not requiring a full DBMS, Leverage is often the most effective solution.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$385

Contact: John Roseman
(212) 349-3355
URBAN SOFTWARE CORP.
93 Nassau Street
New York, NY 10038

Liberator™

Operating System: VMS

Keywords: • Earth resources • Mapping • Petroleum
• Utilities

Memory required: 0.75MB. Distribution media: magnetic tape, RC25 disk for VAX-11/725 systems.

Liberator, written in FORTRAN-77, permits Synercom's mapping graphics and data base management software to run on an Intergraph VAX or any VAX-11 CPU series with a standard VAX/VMS operating system. Liberator provides the functionality of Synercom's INFORMAP II software and also includes the firm's Standard Interchange Format programs, which can be used to convert graphics and attribute data from Intergraph formats to Synercom formats. Liberator's built-in hardware interface provides the flexibility to add low-cost graphics hardware, such as Tektronix 4100-series terminals, as well as Synercom's speed mapping workstation.

Liberator provides mapping graphics and data base management capabilities to build, store, edit, maintain, and retrieve a cartographic-quality data base. Liberator also provides the means to manage and interrelate different records, information layers, symbols, and other information stored in a data base in accordance with mapping conventions. Designed for large, spatially oriented mapping applications, Liberator's data base structure can reduce disk storage requirements by

1032 Information Management

up to eight times, thus significantly improving retrieval speed and reducing disk hardware purchases and overhead. Liberator's capacity to interface with terminals such as the Tektronix 4100 series offers a means to reduce the costs of automated mapping while at the same time extending access to the data base across many organizational boundaries.

Price: \$65,000

Contact: Sales Department
(713) 240-5000

SYNERCOM TECHNOLOGY, INC.
10405 Corporate Drive
Sugar Land, TX 77478

LIMS/DM Data Management System

Operating System: VMS

Keywords: • Chemical • Data collection • Instrumentation
• Scientific

Distribution medium: 1600 bpi magnetic tape.

This multipurpose data collection and management package provides a centralized data base of laboratory information, including test results, sample information, and analytical methods. Automatic data collection from instruments, computers, workstations, and other devices is an intrinsic function of the system.

LIMS/DM provides sample log-in and test assignment; test organizing and scheduling through worklists; manual and automatic data entry; automatic data review; data transformation, using an integrated calculator; report generation; information archiving/retrieving; documented audit trails; sample and test status reports; and directories of samples, methods, worklists, users, and instruments. LIMS/DM interfaces with DIGITAL's LIMS/Sample Management System for added capability.

The system is supported by Varian services and includes consultation, installation, training, and customization.

The minimum requirements for LIMS/DM are a VAX 730/750/780/782/785 with 3MB of main memory and 120MB disk storage. Prerequisite software includes VMS Version 4.0 or later, VAX DBMS Version 2.2 or later, CDD Version 3.0 or later, and VAX FMS Version 2.2 or later.

Price: \$18,000 - \$40,000

Contact: Art Brown
(415) 945-2243

VARIAN INSTRUMENT GROUP
2700 Mitchell Drive
Walnut Creek, CA 94598

MAPS/DB

Operating System: VMS

Keywords: • Data base management • Decision support
• File management • Management

MAPS/DB provides fully integrated data management and retrieval capabilities, based on a relational data design that allows users to manipulate, store, and link data as desired. A user can create a data base with interactive update and maintenance procedures. Other features allow interactive inquiry and ad hoc report generation to provide access to the data. All the features use English-language commands that allow non-data processing managers to create their own systems.

A version of this product is available for the PDP-11 computer.

Price: \$12,000 - \$25,000

Contact: Kevin Walsh

(415) 856-1100

ROSS SYSTEMS, INC.
1860 Embarcadero Road
Palo Alto, CA 94303

MCP (Maintenance Control Program)

Operating System: VMS

Keywords: • Bill of materials • Inventory • Maintenance
• Purchasing

This on-line information management system is designed to support all phases of plant maintenance, spare-parts procurement, and inventory control. The integrated structure of the system coordinates the activities of various users and consists of modular components that support equipment data and history, a master catalog of spare parts, work order processing, maintenance employee data, requisition and reorder notices, stock receipts and issues, engineering and inspection data, bill of materials/parts lists, manpower planning and scheduling, timekeeping, purchase order processing, and corporate-accounting interfaces. At the heart of each version of MCP is a state-of-the-art data base management system selected to optimize the interaction among the host computer's operating system, application data files, and users' terminals.

A user-friendly support layer, which carries such on-line help features as access to the system's data dictionary and validation code tables, is included in each system. The self-tutorial nature of those features provides helpful instruction without imposing prompts and messages on each screen.

All TERA systems include software documentation and source code to facilitate customization and client-specific enhancements requested throughout the life cycle of the system. Other features, such as screen generators and file definition utilities, make system maintenance flexible and easy.

Price: \$150,000

Contact: Robert W. Carey

(415) 845-5200 ext. 559

TERA INFORMATION ENGINEERING CORP.

2150 Shattuck Avenue

Berkeley, CA 94704

MDBS III — DDL/DMS: Full RTL Form

Operating System: ULTRIX-32

Keywords: • Data base management • Language enhancers
• Microprocessor development • Networking

This extended-network DBMS for minis and micros allows simultaneous multiuser access. Data Description Language (DDL) allows the developer to specify the structure and contents of the data base. In addition to supporting hierarchical, relational, and CODASYL-network structures, this software uses a sophisticated extended-network design that eliminates data redundancy and allows simple descriptions of complex data relationships. The data management system (DMS) executes the data manipulation language (DML) specified by the application developer. Extensive automatic recovery and transaction-logging (RTL) mechanisms prevent data loss from media/power failures. A buffer-flushing facility substantially reduces the chance of data loss from abnormal interruptions. Rollback and selective recovery are supported through page-image posting and transaction logging. An interactive version of the DML (IDML) is available. A non-procedural English-like query language interface (QRS) permits ad hoc report generation from an MDBS III data base.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: MDBS III Marketing Representative

(312) 981-9200 or (800) 323-3629

MICRO DATA BASE SYSTEMS, INC.

Application Development Products

85 W. Algonquin Road, Suite 400

Arlington Heights, IL 60005

MEMSYS (DWC Membership Management System)

Operating System: VMS

Keywords: • Data base management

MEMSYS is designed to provide association executives and staff with accurate and timely information. MEMSYS helps associations keep track of members, legislators, executives, outside contacts, and convention attendees. The system keeps an easily retrievable record and history of transactions with each member. This system also functions as an accounts receivable and billing system, handles mass mailings,

keeps track of voting records, and generates reports and newsletters. MEMSYS is written for the PDP series in BASIC-PLUS-2 and for the VAX series in VAX BASIC.

A version of this product is available for the PDP-11 computer.

Price: \$5000 - \$10,000

Contact: David Nisbet
(606) 253-3183

DWC COMPUTER SOLUTIONS, INC.
1642 N. Broadway
Lexington, KY 40505

Microlink

Operating System: VMS

Keywords: • Data base management

Distribution media: magnetic tape, RL02.

Microlink is a computer-aided microfilm retrieval system that maintains the data base of images complete with roll and frame number. Multikey access is provided. An automatic link to microfilm reader/printers is featured.

A version of this product is available for the PDP-11 computer.

Price: \$4000 - \$8000

Contact: David L. Ley
(313) 855-6181

RADLEY BUSINESS COMPUTERS
7071 Orchard Lake Road, Suite 305
W. Bloomfield, MI 48033

Milldata

Operating System: VMS

Keywords: • Data base management • Data collection
• Forms management • Report writer

Milldata not only provides a complete data base system but also offers a programming facility or program interface so that information stored in other data bases on other systems can be introduced into your Milldata data base. This relational data base management system allows you to define the structure and content of your data base records; create your own "form" layouts on a VDU screen ("forms" are used by the operator to talk to the data base); use those forms to enter data, retrieve records, and ask for selected information; and generate reports, using your own predefined layouts.

A version of this product is available for the PDP-11 computer.

Price: £3500 – £8000

Contact: G. Norman
(0734) 699777

D. M. ENGLAND & PARTNERS LTD.

Lytham Court, Lytham Road

Woodley, Reading

Berkshire RG5 3PQ

England

MIMER: The Software Machine

Operating System: UNIX* (System III), VMS

Keywords: • Application development • Data base management
• Programming tools • Query facilities

Memory required: 1MB. Distribution medium: magnetic tape.

MIMER, developed by Mimer Information Systems AB, is a relational data base and fourth-generation language system. Its heart is MIMER/DB, a powerful full-function relational data base giving full multiuser transaction management with concurrent control, automatic restart and recovery facilities, automatic primary and secondary indexing of data, a conventional programming language interface, and an active data dictionary. The other integrated modules include MIMER/SH, a screen handler; MIMER/QL, an easy-to-learn command language enabling users to make their own inquiries and set up their own applications; MIMER/PG, a program generator for specifying and testing applications in a very high-level language that can then be generated into FORTRAN or COBOL source; and statistical, graphics, and information retrieval functions. MIMER is portable and provides the reality of using the same system on a mix of computers, from mainframes to micros.

MIMER has been written in both FORTRAN and LISP.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Mel Gosling
44 (524) 734505
SAVANT ENTERPRISES
2 New Street
Carnforth, Lancashire LA5 9BX
United Kingdom

Miracle Viewdata

Operating System: VMS

Keywords: • Communications • Data collection
• Query facilities • Text management

This complete private information Viewdata system for business users contains a set of program packages that provides a user inquiry system with standard Prestel features, ease-of-use enhancements, and Gateway facilities for data collection, interactive applications, and access to other software systems. Miracle Viewdata provides communications software for exchanging information with Prestel and a sophisticated editor for the creation and maintenance of Viewdata frames.

Other facilities include data collection frames and user statistics.

A version of this product is available for the PDP-11 computer.

Price: £2500 - £20,000

Contact: D. M. England
(0734) 699777

D. M. ENGLAND & PARTNERS LTD.
Lytham Court, Lytham Road
Woodley, Reading
Berkshire RG5 3PQ
England

Mistress "Plus"

Operating System: EUNICE, UNITY, UNIX* (Berkeley, System III, System V), VMS

Keywords: • Data base management • Programming tools
• Query facilities • Report writer

Mistress "Plus" offers all the power of the Mistress Relational Database Management System, along with the flexibility and convenience of M-Writer, the report generator with complete output flexibility, and M-Vision, the full-screen interface that allows data manipulation through single-key operation. With Mistress "Plus," the end user and the DP professional are both guaranteed increased productivity through the use of a matched system.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Barbara Sinclair
(416) 922-1743

RHODNIUS INC.
10 St. Mary Street, Suite 602
Toronto, Ontario M4Y 1P9
Canada

Mistress Relational Database Management System

Operating System: EUNICE, UNITY, UNIX* (Berkeley, System III, System V), VMS

Keywords: • Data base management • Graphics
• Query facilities • Text management

Mistress, the fully relational data base management system for UNIX*, features the Structured Query Language for the end user as well as standard programming interfaces to the C language for the DP professional. Advanced concepts include variable-length character fields, dynamic storage allocation, and B+ tree indexing. Mistress has been designed exclusively for the UNIX* environment and is written in C.

Using SQL commands, the user can create or drop tables and indexes, display data bases or tables, and select, delete, update, insert, and sort data in tables. Mistress classifies information, using a variety of data types, including date, character, dollar, integer, float, and text (variable-length character). Mistress provides easy-to-use commands, on-line help, meaningful error messages, and a built-in editor. The system asks for data interactively, prompting for each field value and checking for input errors.

Mistress has three interfaces to the C programming language, an interface to the UNIX* shell, and optional interfaces to other high-level languages. Multiple concurrent users are supported with complete data integrity. Mistress dynamically maintains B+ tree indexes to ensure faster record retrieval. Efficient bulk loading and unloading of data from standard files provide compatibility with large mainframe installations.

Mistress's innovations provide the superior software solution for data base, information systems, office automation, local networking, color graphics, and CAD/CAM applications.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$850 - \$20,000

Contact: Barbara Sinclair
(416) 922-1743

RHODNIUS INC.
10 St. Mary Street, Suite 602
Toronto, Ontario M4Y 1P9
Canada

Mistress/32

Operating System: EUNICE, UNITY, UNIX* (Berkeley, System III, System V), VMS

Keywords: • Data base management • Forms management
• Programming tools • Report writer

Mistress/32, the advanced relational data base management system for extended addressing UNIX* products, features enhanced capabilities for security, recovery, and data integrity, as well as a fully integrated report writer and screen interface. The Mistress/32 product has a dynamic application generation tool, M-Builder, a full-screen, interactive editor designed to create screens for M-Vision. The editor allows

users to create and to easily make major modifications to M-Vision screens by drawing on the terminal display, thereby eliminating the need to experiment with row and column numbers. Attractive displays can be made using line graphics and terminal video features such as reverse video, highlighting, and underlining. M-Builder screens created on one terminal can be reproduced on other terminal types, since M-Builder uses the "termcap" data base of terminal capabilities.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Barbara Sinclair
(416) 922-1743

RHODNIUS INC.
10 St. Mary Street, Suite 602
Toronto, Ontario M4Y 1P9
Canada

MMS (Micrographics Management System)

Operating System: VMS

Keywords: • Data base management • Data entry
• Forms management • Query facilities

This office-oriented, user-friendly, screen-formatted data entry and computer-assisted retrieval (CAR) system indexes and automatically retrieves microfilm. The system includes a complete data entry subsystem that optionally allows documents to be indexed into the computer directly from microfilm readers/printers or from cameras. Retrieval can be entirely automated, depending on the microfilm equipment used. Retrieval is accomplished through a sophisticated but easy-to-use query-by-example fill-in-the-blanks design that provides the ability to refine, sort, and transmit hit lists.

Retention schedules and management reports, including "search" statistics, are an integral part of the system. The software is designed specifically to reduce keystrokes significantly, while providing powerful editing of all data to ensure accuracy. The software can interface directly with DIGITAL's ALL-IN-1 office automation package. No-keying CAR is possible with this interface module. Existing data files can be output to microfilm (COM) and retrieved, all automatically under software control.

The interface software for almost all the leading microfilm reader/printer manufacturers (Minolta, Kodak, and so on) is included. Roll film, fiche, aperture cards, and hard copy can be retrieved automatically or semiautomatically, depending on the manufacturer selected.

Price: \$15,000 – \$25,000

Contact: John H. Wright
(305) 652-1710 or (301) 261-8232
FLORIDA COMPUTER, INC.
99 N.W. 183rd Street, Suite 126
North Miami, FL 33169

NDDBS (*N*-Dimensional Data Base System)

Operating System: VMS

Keywords: • Data base management • Data conversion
• File management • Mathematics

NDDBS provides for the storage and retrieval of multidimensional data. NDDBS implements a mathematical concept known as Generalized Balanced Ternary (GBT) to create an *N*-dimensional space, structured as a hierarchy of aggregates. Developed mainly as a tool for investigating the GBT concept and its applications potential, NDDBS provides the standard data base operations of storage, retrieval, update, and delete, as well as *N*-dimensional algebraic operations. As an experimental software system, NDDBS has proved very successful in working with NASA meteorological data. NDDBS offers the user a basis for exploring the application of the GBT concept to multidimensional data base systems.

GBT is a higher-dimensional analog of the 1-dimensional system known as balanced ternary. GBT structures space so that data can be aggregated. An automated system can then examine the general content of the data without looking at the detail. GBT also provides an automated system with a rapid manner of deciding which data points are close to each other in the structured space. Thus, multidimensional data can be easily stored so that natural clustering occurs. GBT not only is a method for representing space but also provides a data base addressing scheme. Further, GBT offers an algebraic system that operates on those addresses for easy movement from one data base location to another.

Price: \$1125

Contact: Customer Support Department
(404) 542-3265
NASA'S COMPUTER SOFTWARE MGT. AND INFO.
CENTER
University of Georgia, 112 Barrow Hall
Athens, GA 30602

Omnibase

Operating System: VMS

Keywords: • Application development • Data base management
• Forms management • Query facilities

This complete end-user relational data base management interface to the Britton-Lee, Inc., Intelligent Database Machine (IDM) provides productivity and performance enhancements that dramatically increase throughput and response time. Omnibase consists of interactive modules that address both the end-user environment and the applications development environment.

Request/Query is a VAX front end and interactive query facility to the IDM. Request/Report Writer is callable from any VAX language through Omnibase Programmer's Application Library (OPAL), which allows users to call the Interactive Query Language (IQL) from any VAX language interactively at run time. Smartdesign allows non-programming design of multiple window, scrolled-form applications. Smartquery supports sophisticated query capabilities, using a simple keypad. Smartcall, Smartstar's call interface, when used with OPAL, supports complete design and query of multiple-table applications. Preprocessors are query interfaces to VAX FORTRAN and COBOL in a preprocessing environment. Omnibase/RMS Access Kit allows Smartstar, Smartcall, Request/Query, Request/Report, and OPAL to be used on VAX/RMS and IDM. OBA utilities are menu-driven administrator utilities and procedures.

Price: Available upon request

Contact: Software Sales
(805) 683-3771

SIGNAL TECHNOLOGY, INC.
5951 Encina Road
Goleta, CA 93117

OPIS/3™ (Outside Plant Information System)

Operating System: VMS

Keywords: • Data base management • Facilities management
• Mapping • Telecommunications

Memory required: 0.5MB. Distribution media: magnetic tape, RC25 disk for VAX 11/725 systems.

OPIS/3, written in FORTRAN-77, addresses the three logical functional components typically involved in outside plant management. Each level runs as an application to Synercom's INFORMAP II graphics and data base management software. OPIS/3 adds the ability to use the information maintained in the INFORMAP II data base to automate critical engineering design and analytical functions, such as cable throw, loop make-up reporting, work-print generation, and cable-fill calculation.

Level one, OPIS DESIGNER, consists of analysis and engineering functions that allow the outside plant engineer to study and modify a network: a loop make-up module for analyzing circuit characteristics, a cable-throw module for preposting and posting count reassignments, a cable-fill function to calculate cable utilization statistics, and an area transfer function to allow rearrangement of wire center boundaries.

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Level two, OPIS VERIFI, is a subset of input, validation, and editing functions to make building and managing the outside plant data base efficient. OPIS VERIFI includes input procedures to ensure establishment of network connectivity, validation modules to identify and highlight data not meeting user-designated criteria, and editing modules for modification of outside plant data.

Level three, OPIS JOB MANAGER, includes a series of work-print generation and job-tracking functions to facilitate the orderly flow of data base transactions, from job design to job closing. OPIS JOB MANAGER allows the generation of multiple alternative designs for a given job, preposting of proposed data base changes, processing of as-built changes, posting of jobs at closing, generation of hard-copy work prints, and generation of various reports, such as summaries of labor and materials.

Price: \$25,000 – \$110,000

Contact: Sales Department
(713) 240-5000

SYNERCOM TECHNOLOGY, INC.

10405 Corporate Drive
Sugar Land, TX 77478

ORACLE® Relational Data Base Management System

Operating System: ULTRIX-32, VMS

Keywords: • Data base management • Data dictionary
• Data entry • Report writer

ORACLE, available for mainframes, minis, and microcomputers, is currently installed at more than 350 sites worldwide. The system is implemented for a wide variety of DBMS applications, including medical research, government, education, financial management and accounting, project management and control in manufacturing, and engineering research and development.

ORACLE is designed for networking and distributed data base capability and is highly portable (source language is C) across computer systems. Features include the SQL PLUS nonprocedural data language, a fully integrated data dictionary, an interactive screen facility, a report writer, and other application development tools for all levels of users, as well as transaction journal and data base maintenance utilities.

A version of this product is available for the PDP-11 computer.

Price: \$600 – \$96,000

Contact: Robin Tygh

(415) 854-7350

ORACLE CORP.

2710 Sand Hill Road

Menlo Park, CA 94025

P-STAT®**Operating System:** ULTRIX-32, UNIX* (Berkeley)**Keywords:** • Data base management • Decision support
• Statistics

This versatile, integrated software package for data management, data display, cross-tabulation, and statistical analysis offers a fully interactive and user-friendly command language that is both powerful and easy to learn. An internal P-STAT editor enables the user to correct errors immediately and continue command execution. P-STAT may also be used in batch mode.

Double-precision numeric values are assumed unless single precision is specified. P-STAT supports alphanumeric data. Each character variable in a file may be up to 999 characters long.

P-STAT enables the user to create new variables, recode existing variables, select cases, and aggregate across subgroups within a file. A comprehensive set of arithmetic functions includes square root, log, and so forth. Character functions include CONTAINS, SUBSTRING, and LENGTH.

Many P-STAT files may be active during a P-STAT session. The commands include JOIN, CONCAT, COLLATE, RANK, SORT, UPDATE, SEPARATE, INTERLEAVE, and TRANSPOSE.

P-STAT offers statistical operations, including analysis of variance, correlation, discriminant and factor analysis, exploratory data analysis, matrix operations, regression analysis, and a number of descriptive statistics such as chi-square, measurements of skewness, and so forth.

The data display includes plots, histograms, cross-tabulation, and report writing. The new EDA command has box plots, stem and leaf plots, rootograms, and so on. Displays may be modified interactively without having to access the original data files.

A macro facility permits a series of commands to be executed within a single statement. Macros can be nested, and character string substitution is permitted. Macros may call macros.

P-STAT is used internationally by government, commercial, and educational installations. Typical applications include market research, personnel administration, system performance analysis, quality assurance, and clinical trials. P-STAT has authorized representatives in the United Kingdom and Australia.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: Available upon request

Contact: Sebbie Buhler
(609) 924-9100 or Telex: 466452
P-STAT, INC.
P.O. Box AH
Princeton, NJ 08542

Pack

Operating System: VMS

Keywords: • Decision support • Forecasting • Sales analysis
• Statistics

Distribution medium: 9-track 1600 bpi magnetic tape.

This comprehensive statistical system, written in FORTRAN IV and based on single-equation Box-Jenkins theory, builds models from time-series data. The model is estimated, tests for sufficiency and necessity are examined, and then the model is used to forecast. During the estimation process, the data is reduced to noise. This noise, along with the standard errors of the estimated parameters, is used to provide forecast uncertainty.

The system allows the user to optionally perform univariate or multiple-input analysis either interactively or through a batch run for the following:

- Univariate time-series model identification, estimation, diagnostic checking, and forecasting
- Single-input transfer function model identification, estimation, diagnostic checking, and forecasting
- Multiple-input transfer-function model identification, estimation, diagnostic checking, and forecasting
- Intervention model estimation, diagnostic checking, and forecasting

Routines, such as preliminary estimates, univariate conversion, transfer function conversion, aggregated forecast variance, improved transfer function identification, the preprocessor, and the automatic univariate identification are available at modest rates to enhance the system.

A version of this product is available for the PDP-11 computer.

Price: \$200 - \$2400

Contact: D. P. Reilly

(215) 675-0652

AUTOMATIC FORECASTING SYSTEMS, INC.

P.O. Box 563

Hatboro, PA 19040

PACS™ (Process Accounting and Chargeback System)

Operating System: VMS

Keywords: • Billing • Data collection • Report writer
• Statistics

This comprehensive computer facility management system provides system-utilization statistics, income and expense allocations, and chargeback billing reports. PACS supports on-line reports to users, graphical output to VT100 terminals, and optional warning or log-in defeat for users who have exceeded their budgets.

The system's data collection cycle summarizes the day's process accounting information and determines current disk utilization. The monthly report-generation cycle creates detailed monthly invoices for the accounts, a data file suitable for automatic data entry into an existing financial accounting system, and a summary report of the month's activity to date. The report-generation cycle can be performed at any point during the month to get reports of activity to date.

The system reports include an itemized summary of services, a customer summary, a daily system summary report, a system hourly report file, and cost and income summaries by account and by resource, respectively.

DIGITAL distributes this software product under license from Signal Technology, Inc.

PACS™ is a trademark of Signal Technology, Inc.

Refer to SPD #A0.55.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$4900

Contact: Consult your local DIGITAL sales office (see Introduction).

PAPICS (Product and Project Information Control System)

Operating System: ULTRIX-32, UNIX* (Berkeley), VMS

Keywords: • Project management

PAPICS is a dedicated information system holding data generated or used in the course of a project. The objective of any such project may be development as well as maintenance. PAPICS is a tool supporting not only the programmers but the managers as well.

All data, software as well as information for the managers, is held in well-structured units and can therefore be presented in a simple, selective way. The tools for managers can deal with project phases as defined by individual software life cycles. Time and budget can be controlled in a most effective way.

PAPICS can hold and administer each product in even hundreds of versions, which will be stored and dealt with economically.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: DM 84.000

Contact: Mr. Feigelbinder
49-089 92 52 - 2 31
SOFTLAB GMBH
Arabellastrasse 13
8000 Munich 81, Bavaria
West Germany

PDP-11 DATATRIEVE/VAX

Operating System: VMS

Keywords: • Data base management • Query facilities
• Report writer • Text management

Distribution media: RX01, TU58 DECtape II cartridge.

This interactive query, report generation, and data maintenance system runs under the VAX/VMS operating system in conjunction with VAX-11 RSX. Users of this self-teaching system need little computer experience.

DATATRIEVE uses the RMS record management services to access data in disk files of sequential, indexed, or relative organization and provides selective data retrieval, sorting, formatting, updating, and report generation without the need for programming. Record and domain (file) definitions entered in DATATRIEVE are stored in data dictionaries shared by DATATRIEVE users. The dictionaries store frequently used sequences of commands to be recalled and processed later. Additional commands list the contents of the data dictionary, delete entries, and control access to individual entries in the data dictionary. A dictionary compression utility cleans up the data dictionary index file.

DATATRIEVE enables the user to define domains that cross RMS file definitions and subset record definitions. DATATRIEVE provides an Application Design Tool (ADT) to assist the novice in creating domain and record definitions. The ADT uses an interactive dialog technique to guide the user through data definition and creates an indirect command file that is then processed to update the DATATRIEVE data dictionary.

The DATATRIEVE report writer provides easy-to-use commands to control report name, date, and page numbering; page width and length specifications; detail line specifications; multiple control break specifications with automatic totaling at any level; and multiple report sections. DATATRIEVE report commands can be freely intermixed with other DATATRIEVE commands.

DATATRIEVE uses simple English-like commands for data retrieval, modification, and display. Prompting is automatic for both command and data entry.

Refer to SPD #25.14.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$4200

Contact: Consult your local DIGITAL sales office (see Introduction).

Pioneer COMMAND System for Financial Management, Distribution, and Manufacturing

Operating System: VMS

Keywords: • Data base management • Distribution
• Financial management • Manufacturing

The COMMAND System, developed by Pioneer Software International, is interactive, on line, user friendly, and totally integrated. This system is written in BASIC-PLUS-2 and requires a minimum of 64K words. Because the system is based on Userware International's USER-11 Database Management System, extensive on-line inquiry and ad hoc reporting are available.

The COMMAND System consists of Sales Order Processing, Accounts Receivable, Purchase Order Processing, Accounts Payable, General Ledger, Inventory Management, Bill of Materials Processor, Material Requirements Planning (MRP), and Production Control, which consists of Work Order Processing, Routing, and Work Center Loading. The COMMAND modules are designed and function as integrated software but may be purchased and installed separately in almost any sequence. Because the system is based on USER-11, each module may be tailored to meet user requirements.

A version of this product is available for the PDP-11 computer.

Price: \$3000 - \$12,000

Contact: Jered Cady, Vice President, Sales and Marketing
(619) 745-6006

USERWARE INTERNATIONAL
2235 Meyers Avenue
Escondido, CA 92025

PNMS III (Peregrine's Network Management System III)

Operating System: ULTRIX-32, UNIX* (Berkeley)

Keywords: • Data base management • Data dictionary
• Networking • Operations

This data center management system allows users to manage problems at a user help desk. Other functions include inventory management, configuration management, financial management, and change management.

The computer operations manager can access the status of hardware and software problems, the location of data center inventory, and scheduled changes to configurations of hardware and software. Financial information, such as invoice reconciliation or contract expiration dates, is also available.

The user can change screen, file, and report formats. A relational data base, a report writer, and a query system are also included.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$1500 – \$34,875

Contact: Leslee Mills

(714) 855-3923

PEREGRINE SYSTEMS, INC.

15530 Rockfield Boulevard, Building C

Irvine, CA 92718

POISE DMS-Plus

Operating System: VMS

Keywords: • Data base management • File management

This system allows nontechnical users to generate complete software applications and allows programmers to implement sophisticated systems without writing code. DMS-Plus is a flexible set of programs that can be used to solve many information management problems. DMS-Plus provides complete file maintenance programs, including file creation and definition, file-to-file data handling (which eliminates the need for redundant entry), on-line inquiry capabilities, user-defined screen formatting, a powerful information retrieval system (with sort and selection of any field or combination of fields), a multi-purpose label program, and a versatile report generator. List processing and text editing are included at no additional charge. Data elements can be added or modified without recompiling programs. DMS-Plus allows simultaneous multiuser access and provides terminal independence through optional screen or line mode.

The POISE Company also offers a complete line of administrative applications for educational institutions. All POISE systems use the data management concept, and all feature interactive data entry and on-line inquiry with update. The POISE approach avoids the drawbacks and complexities of traditional data base management systems by providing greater flexibility, speed and simplicity in implementing changes, and ease of use by nontechnical personnel.

A version of this product is available for the PDP-11 computer.

Price: \$14,000 – \$17,500

Contact: Eva Kinnard

(505) 623-8554

THE POISE COMPANY, INC.

201 North Nevada

Roswell, NM 88201

PORTACALC (AnalytiCalc): A 3-D Spreadsheet/Data Base System in VMS/BACKUP

Operating System: VMS

Keywords: • Calculation aids • Data base management
• Spreadsheets

PORTACALC is a powerful 3-dimensional spreadsheet/data base and analysis system. This version permits DCL commands to be spawned, which enables you to interact with other applications without leaving the spreadsheet. Spreadsheet cells can test ASCII values of formulas and execute arbitrary commands from inside a cell program. Text integration permits a screen display of external files and integration with output or screen-controlled insertion of word processing files into spreadsheet outputs with screen-controlled indentation.

A built-in data management system interface permits spreadsheets to access unlimited files and records or parts of records for user-defined functions, numbers, formulas, and text. Merging of multiple sheets, matrix algebra, general function solving, and easy document load/unload are included. User commands may be entered through keyword or function keys and are provided with a help system.

The program can be ported to other FORTRAN systems. Tutorials and documentation are supplied. Recustomizing for other terminals is easy.

Note: Changes and improvements include doubled speed through improved calculation, enhanced scrolling, and load with relocate. PDP-11 build procedures have been updated. A logical named area and MACRO support have been added. PDP-11 users, see DECUS number 11-SP-47. DECUS number V-SP-24.

A version of this product is available for the PDP-11 computer.

Price: \$5 - \$225

Contact: DECUS (see Introduction)

PORTACALC/AnalytiCalc: A 3-D Spreadsheet/Data System

Operating System: VMS

Keywords: • Calculation aids • Data base management
• Spreadsheets

This new version of PORTACALC adds speed, symbolic names and macros, area addressing, random numbers, new functions, and other enhancements. AnalytiCalc can do matrix math and has some routines for interactively searching up to 8-dimensional spaces for solutions to problems.

This powerful 3-dimensional spreadsheet/data base and analysis system runs on PDP-11 systems that support the F4P compiler or on VAX systems needing the VAX FORTRAN compiler to compile. The program is designed for portability to other FORTRAN systems. The PORTACALC manual is designed to be turned into a system help file so that the manual can be read on line. Tutorials are supplied as well.

A data management system interface is built in, permitting spreadsheets to access a potentially unlimited number of files and records or parts of records in those files for user-defined functions, numbers, formulas, and text. Merging of multiple sheets, matrix algebra, general

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function solving, and easy document load/unload make this spreadsheet more powerful and easier to customize than all but the most elaborate mainframe packages. A powerful text integration function permits integration of word processing files with reports, permitting use of AnalytiCalc to integrate sections of reports edited with any editor. DECUS number 11-SP-47.

A version of this product is available for the PDP-11 computer.

Price: \$5 - \$225

Contact: DECUS (see Introduction)

Project Control and Accounting

Operating System: VMS

Keywords: • Accounting • Billing • Cost accounting

Distribution media: 9-track 800/1600 bpi magnetic tape, RX01, TU58 DECtape II cartridge.

This package allows users to have one user name on the system but to bill work to other projects as well. The project can be changed at any time during a log-in session. All work done, including batch jobs, sub-processes, and print jobs, will be charged to the project in effect when the command is issued. All computer time and other usage is then reported by project.

All project activity is controlled from a project account, which can authorize selected users to become members of the project. Only members of a project can access information about the project. The project manager can establish what actions to take when the command PROJECT is used. The default directory and the UIC can be changed automatically to the project directory or subdirectory (of course, no change is also possible). Optionally, a projectwide log-in file can also be executed. The project manager can add and remove users from the project on line at any time.

ACT V4.4 is a required prerequisite.

Price: \$2300

Contact: B. Mossberg
(213) 837-8339

INTERNATIONAL STRUCTURAL ENGINEERS, INC.
P.O. Box 241740
Los Angeles, CA 90024

RABBIT-1 (Resource Accounting, Auditing, and Billing System)

Operating System: VMS

Keywords: • Accounts receivable • Billing • Report writer
• Service industries

RABBIT-1 audits, accounts for, and allocates computer usage to individuals, groups, projects, or customers. Those users can be real accounts receivables, like a service bureau. Or, RABBIT-1 can be used to budget in-house system resource consumption.

RABBIT-1 keeps such up-to-date session data details as date, log-on time, connect time, and CPU. That audit trail gives accountants and auditors detailed invoicing backup and system security. Furthermore, RABBIT-1 calculates such charges as tape storage, equipment rental, manuals, communication costs, printer forms, and programming services. That added chargeback capability makes organizing and accessing data usage easier and quicker.

RABBIT-1's powerful report generator provides summaries, subtotals, recaps, and cross-footing for complete control of usage data. User, account, and recap reports help communicate to customers or users very effectively. The summary report prints out as either an invoice or a statement. RABBIT-1 users may design that report and others as required. The tabular-type detail report optionally lists each charge according to how much information is to be shown. The recap report is used to summarize information across accounts.

Those reports and many others help present technical data in terms that nontechnical persons can understand. All reports can be modified without reprogramming. Other RABBIT-1 reports include project accounting, disk file usage, communication analysis, tape storage rental, program usage/surcharge, production throughput, budget to date, printer usage, and end of session.

Menu-driven set-up procedures make installation quick and easy. Automatic prompting and HELP commands make RABBIT-1 easy to set up, maintain, and modify. Along with free remote installation, RAXCO provides free enhancements, technical support, and training.

A version of this product is available for the PDP-11 computer.

Price: \$1995 - \$5995

Contact: Joseph Musler
(301) 258-2620
RAXCO, INC.
1370 Piccard Drive
Rockville, MD 20850

RABBIT-2

Operating System: VMS

Keywords: • Graphics • Operations • Report writer
• Service industries

RABBIT-2 is a performance analysis and capacity planning tool. Bar charts and graphic displays show how much you use system components and peripherals. Charts show your system performance hour by hour, user by user, or program by program. Sketches show a profile of

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your average system day, your average user demands, and your average program resource requirements, even projections of your future computer needs.

System programmers, operations managers, and DP management all benefit from RABBIT-2 data. The system's output is directed to a user's terminal, printer, or plotter, where resource usage appears in graph and bar chart form. That resource-usage information is gathered by using interactive English-like commands. RABBIT-2 accepts more than 100 command functions.

You can get RABBIT-2 for image or program analysis. You choose the time interval (seconds, minutes, hours, days) and time period. For example, you can analyze resources such as CPU, BIO, DIO, PWS, FAU, QIO, PAGES, and ELAPSED time. Then, after modification, you can review a program for efficiency percentages. Thus, you can see the true needs of a program and can pinpoint your capacity needs.

You can use RABBIT-2 monitor data as input to get systemwide demand graphs, plus user or program demand requirements. RABBIT-2 even gives you minute-by-minute time-frame graphs, monitor snapshots that detail each use of the system. RABBIT-2 takes that material and converts cumulative resource usage values to intervals specified to get true time-interval reporting. RABBIT-2 can help you determine relative response time under various circumstances. The system reports the reality rather than the subjective user impression, which is important to the successful use of your system.

RABBIT-2 generates three basic categories of report: time interval, rank, and profile. The time-interval report is a horizontal or vertical bar chart of resource usage. The rank report lists resource consumption by user or program in decreasing statistical order and also ranks usage by ratio, such as CPU for each connect hour. The profile report lists all entity names in the active data set, sums up all statistics, and shows the percentage breakdown for each statistic by process type.

A version of this product is available for the PDP-11 computer.

Price: \$1995 - \$4995

Contact: Joseph Musler
(301) 258-2620
RAXCO, INC.
1370 Piccard Drive
Rockville, MD 20850

RABBIT-6 Image Monitor

Operating System: VMS

Keywords: • CAD/CAM • Graphics • Operations
• Programming tools

RABBIT-6 determines where system resources are being consumed in a program (image). RABBIT-6 tracks the resource consumption by subroutine name, line number, or address and offset and creates a bar chart showing CPU consumption by subroutine over time.

The program analyst, using image-monitor output, can quickly determine the area of program code that requires optimization to increase efficiency. RABBIT-6 thus reduces the professional analyst's systems check-out time and program and system run time.

RABBIT-6 is a stand-alone system requiring no sysgen or operating system modification.

Price: \$2995 - \$3995

Contact: Joseph Musler
(301) 258-2620
RAXCO, INC.
1370 Piccard Drive
Rockville, MD 20850

Rapport

Operating System: MicroVMS, ULTRIX-32, ULTRIX-32m, VMS

Keywords: • Application development • Data base management
• Decision support • File management

Memory required: ½MB and 10MB of disk. Distribution medium: 9-track 1600 bpi magnetic tape.

This high-performance relational data base management system, written in FORTRAN, provides Rapide, a fourth-GL rapid application development tool; RaSQL, a higher-level query language; and FORTRAN-66, FORTRAN-77, COBOL, and Pascal programming interfaces. Rapport's relational structure allows users to model complex, real-world relationships in a natural, direct way, using 2-dimensional tables. Rapide's rapid interactive development environment gives application programmers an alternative to FORTRAN, COBOL, and so on.

Rapide is a procedural, computationally complete query and update language allowing the rapid development of prototype applications and the generation of highly structured reports. The Rapide screen data entry modules enable users to paint screens on a terminal and chain them into a screen-oriented application. RaSQL is a high-level nonprocedural query language based on IBM's SEQUEL-2 language specification. That module gives the user an easy-to-learn, powerful method for creating tabular listings.

Rapport provides rapid access to the data base, using its own hashed file structures, with any number of alternate indexes. Extensive performance analysis and tuning tools are also available. Data integrity is maintained through before-and-after image logging for rapid recovery

from software and hardware failure. An automatic data-locking system ensures consistency while multiple users are simultaneously updating and accessing the data base.

Rapport has more than 250 installations worldwide and is used in energy, banking, chemicals, manufacturing, engineering, education, research, and defense. Rapport's unlimited application areas include CAD, inventory control, scientific data analysis, management information systems, financial planning, project and configuration management, simulation modeling, production control, and personnel management.

Rapport is one of the most portable data base systems available, running on mainframes, minicomputers, and microcomputers.

Price: \$14,250 - \$58,000

Contact: John Wright

(212) 682-9344

LOGICA DATABASE PRODUCTS, INC.

666 Third Avenue

New York, NY 10017

Rdb/ELN (Relational Data Base Management System)

Operating System: MicroVMS, VMS

Keywords: • Data base management • Data dictionary

Distribution media: 9-track 1600 bpi magnetic tape.

VAX Rdb/ELN is designed for dedicated applications on systems running in the VAXELN application environment. VAX Rdb/ELN applications are developed using the VAXELN Toolkit on a host VAX/VMS or MicroVMS system. The resulting bootable, VAXELN-based Rdb/ELN application is then moved to the VAXELN target system, using disk media or an Ethernet Local Area Network (LAN) link. The application program executes on the target system as a dedicated data base system. The network link to the host development system may be used for remote debugging.

Refer to SPD #28.03.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$1500 - \$7500

Contact: Consult your local DIGITAL sales office (see Introduction).

Rdb/VMS (Relational Data Base Management System)

Operating System: MicroVMS, VMS

Keywords: • Data base management • Data dictionary

• Programming tools • VAX Information Architecture

Distribution media: 9-track 1600 bpi magnetic tape, RA60, RC25, RK07, RL02.

VAX Rdb/VMS is designed for the VAX/VMS operating system. Run-time and remote access is provided for the MicroVAX I and the VAXstation I, and run-time, remote-access, and development capabilities are available for the MicroVAX II and the VAXstation II. Application programs developed to access VAX Rdb/VMS data bases and running under VMS on a given node in a DECnet network can access either Rdb/VMS data bases on the same node or Rdb/VMS or Rdb/ELN data bases on other nodes in the network.

Rdb/VMS implements the Digital Standard Relational Interface (DSRI). This allows programs running on any VAX or MicroVAX to access all other DSRI-compliant data bases. Rdb/VMS also supports unstructured data (segmented strings). This new data type allows the data base to arbitrarily store large pieces of unformatted data efficiently. Segmented strings can store text, graphic images, digitized voice, or any other large data object.

VAX Rdb/VMS features include a data definition language, a data manipulation language, a data dictionary, data base utilities, a relational data base operator (RDO) language, concurrency and integrity controls, and security. In addition, VAX Rdb/VMS provides precompiler support for VAX BASIC, VAX COBOL, VAX FORTRAN, and VAX Pascal. Access through callable RDO is provided for VAX BLISS-32, VAX PL/I, VAX DIBOL, VAX C, and RPG II.

The VAX Common Data Dictionary is optional but recommended. When the CDD is used, VAX Rdb/VMS maintains identical copies of data definitions in the data base and in the CDD. High-level languages and other VAX software products can use record definitions stored in the CDD. Other data bases can use the field definitions stored in the CDD.

Price: \$9000 – \$13,500

Contact: Consult your local DIGITAL sales office (see Introduction).

RDM, Version 3.1

Operating System: MicroVMS, VMS

Keywords: • Application development • Data base management
• Forms management • Report writer

Distribution media: 800/1600 bpi magnetic tape, RX01, RX02.

This general-purpose data base software allows users to design and use their own applications. Menu structured and table driven, RDM allows even nonprogrammers to develop complete applications.

Data files may be generated and modified with the RDM data dictionary editor. The RDM forms program allows quick definition of unique screens for data input, review, or edit. RDM's powerful report writers allow simple or sophisticated reports to be designed with total control of both format and logic. A process generator allows users to design processes that calculate, assign, and move data among as many as four

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files. Simplified logic control permits the user to implement most common processing routines without writing complex code. On-line help and file-maintenance utilities are included.

A version of this product is available for the PDP-11 computer.

Price: \$2495 - \$4795

Contact: Tom Madison
(503) 644-0111

INTERACTIVE TECHNOLOGY, INC.
1225 N.W. Murray Road, Suite 108
Portland, OR 97229

READER (Read, Extract, and Display Reports)

Operating System: VMS

Keywords: • Decision support • Presentation aids
• Query facilities

This utility permits the user to efficiently read, extract, and display reports such as invoices, financial statements, purchase orders, checks, and manufacturing statements. READER locates required data by requesting a specific page or by searching a file for user-supplied keywords or phrases. READER enables a user to go back and forth through pages, scroll up and down within a page, and print selected pages of a report. A user may utilize either 80- or 132-character lines while viewing the file.

With READER, a user can select groups of columns from a report and display them side by side on a terminal screen in any desired sequence, by interactively specifying up to five start/stop column parameters. Those parameters define a viewing format that can be stored for later use. Additionally, a user can read in prestored viewing formats from a file on a disk, providing a virtually unlimited number of those formats.

Price: Available upon request

Contact: Gary M. Kuba
(617) 937-8500

INTERACTIVE SYSTEMS, INC.
600 Suffolk Street
Lowell, MA 01854

Reliant

Operating System: ULTRIX-32, UNIX* (Berkeley), VMS

Keywords: • Data base management • Data dictionary
• Data entry • Report writer

The Reliant information management system provides a mechanism for organizing and processing data from any application and builds a custom computer software system for your particular needs. The system consists of:

- The data definition system, which allows you to quickly define the information you want to enter into the computer

- The general data entry layer, which uses your definitions to prompt you in error-free data entry, revision, and deletion
- The report generator, which allows you to quickly specify what subsets of your information you want to retrieve and in a user-defined format

You can change either data or report definitions at any time, and you never need to learn a computer language to use the system.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$1200

Contact: Dr. Blaine Garfalo, President
(216) 421-8737
DAYSTROM SYSTEMS, INC.
11206 Euclid Avenue
Cleveland, OH 44106

Resource Accounting Module

Operating System: VMS

Keywords: • Billing • File management • Operations
• Property management

This module tracks computer resources on the VAX/VMS operating system by using the ACCOUNTING.DAT data file. The module also uses the DISKQUOTA facility to record the daily disk use for each UIC. The major components are customer master file management, a UIC master file, price schedules, holiday routines, and a report writer.

A version of this product is available for the PDP-11 computer.

Price: \$3000 - \$6000

Contact: Robert G. Jackson
(919) 766-0571
RESOURCE SYSTEMS CORP.
4000 Clemmons Avenue, P.O. Box 1546
Clemmons, NC 27012

Retrieval

Operating System: MicroVMS, VMS

Keywords: • Data base management • Data dictionary
• Query facilities

Memory required: 512KB and 10MB storage capacity.

This self-contained, user-oriented, easy-to-use package, written in C, provides storage and on-line retrieval of data and text documents. The user-defined document structure consists of at least one segment with formatted data and at least one segment with free text. Based on a controlled dictionary (Thesaurus), the system renders automatic indexing of the free text. No manual indexing is required.

The program product applies the Oracle relational data base management system as the support system and access method. While Oracle makes available the powerful SQL language for data manipulation and retrieval of formatted data, DIGITRIEVE expands the Oracle capabilities to unformatted data by implementing the syntax of the IBM industry-standard "Stairs."

The formatted data fields are accessible by the SELECT command; the free-text documents are accessible by SEARCH, using any word or phrase listed in the dictionary.

Relational DIGITRIEVE-11 applies the inverted-file technique. For each term listed in the dictionary, DIGITRIEVE-11 maintains an inverted list, which facilitates quick access to target information.

A version of this product is available for the PDP-11 computer.

Price: \$800 - \$4800

Contact: Dr. E. Wessner
(0222) 54 33 52-53

C.T.A. COMPUTER TECHNOLOGY & AUTOMATION
Margaretenzügel 12
A-1050 Vienna
Austria

RIM5 (Relational Information Management Data Base System)

Operating System: VMS

Keywords: • Data base management • Engineering • Scientific

This general-purpose data base management system for data processing applications is useful in scientific and engineering areas. RIM5's command language offers the user direct on-line or batch access to information in the data base. RIM5 is intended to be a fully relational DBMS, with data stored in tables instead of in hierarchical or network relations. As new applications arise, the RIM5 data base can be easily modified.

In the RIM5 data base system, data is stored in a 2-dimensional table termed a relation. The table contains attributes of the relation and data occurrences. The relations and their attributes are defined as the schema of the data base. RIM5 commands permit the user to create, update, and query the data base. The data base structure is defined in terms of attributes, relations, constraints (rules), and passwords. Data in the RIM5 data base may be of fixed or variable length of the following types: text, integer, real, double precision, vectors (integer, real, double precision), and matrixes (integer, real, double precision). The RIM5 user can easily load new relations, modify the data base, or modify the schema.

The RIM5 program is designed as a stand-alone system and can be executed in a menu mode or a command mode. In the menu mode, the user is prompted for the inputs to create, update, and query the data base. In the command mode, the user inputs the RIM5 commands. An extensive on-line help facility is available. RIM5 can also be interfaced with any application program that is written in a language capable of calling FORTRAN routines.

Price: \$2800

Contact: Customer Support Department
(404) 542-3265

NASA'S COMPUTER SOFTWARE MGT. AND INFO.
CENTER

University of Georgia, 112 Barrow Hall
Athens, GA 30602

RTFILE

Operating System: MicroVMS, VMS

Keywords: • Application development • Data base management
• File management

RTFILE is an interactive fourth-generation relational data base management system combined with an object library for use in developing nonprocedural applications. Interactive menu-driven utilities include data base definition/data dictionary; relational algebra; CRT screen/form generation; transaction processing; sort, select, and calculate specification generation; report generation and query language; list processing; and FORTRAN, Pascal, C, and MACRO-11 program language interfaces.

This product is distributed in Europe by Hammond Software: Stiegbreite 1, D-3400 Goettingen, West Germany; or 80 City Road, London EC1 Y2AR, Great Britain.

A version of this product is available for the PDP-11 computer.

Price: \$500 - \$5000

Contact: Judith C. Mangels
(301) 654-9120

CONTEL INFORMATION SYSTEMS
4330 East-West Highway, Suite 200
Bethesda, MD 20814

RTIRIM

Operating System: VMS

Keywords: • Data base management • Engineering • Scientific
Memory required: approximately 900 pages; 400 pages minimum. Distribution medium: 9-track 1600/6250 bpi magnetic tape.

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This highly efficient and versatile data base management system, compatible with FORTRAN-77, implements a comprehensive relational algebra model of information management. RTIRIM is a powerful tool for the sophisticated user but also allows data processing novices to operate the system after only a few hours of training.

The system is based on RIM-5, which was developed for NASA and is used throughout the U.S. engineering and scientific community. RTIRIM contains substantial improvements to RIM-5 in both functionality and system reliability and is available for several mainframes and engineering workstations.

RTIRIM is accessible either as a stand-alone query and graphing system or from an application program. On-line help is available, and the system presents clear, informative error messages. The RTIRIM commands are English-like and easy to learn and remember. Application programs access the data base with straightforward subroutine calls. On-line data base graphing is based on Tektronix 40xx protocol.

The RTIRIM information handling is dynamic. Thus, fixed or preset structural linkages of data are not required. The system supports data transfer between the data base and ASCII files. Data can be retrieved, sorted, and analyzed statistically. Relational operators, including union and outer product, make advanced data combination and retrieval possible for large constituent relations.

RTIRIM has multiuser capability. Each user has a separate copy of RTIRIM, and the various copies cooperate to control the multiple accesses.

Data integrity is ensured through multiple levels of password protection, the ability to define rules to load data in its proper domain, and appropriate locks in the multiuser mode.

A comprehensive companion report writer, RTIRPW, is available. The FORTRAN-77 source code is available for both RTIRIM and RTIRPW, as well as a powerful general-purpose utility in source form for maintenance and configuration control of source code.

Price: \$3000 - \$7000

Contact: Kjell Olsson

(206) 451-8144

RIM TECHNOLOGY, INC.

P.O. Box 2564

Kirkland, WA 98033

SATURN-BASE™

Operating System: VMS

Keywords: • Accounting • Application development
• Data base management • Development tools

This comprehensive million-record DBMS, used by applications developers and end users to create custom-designed systems, is equipped with accounts receivable, depreciation, inventory applications, and an integrated library of development tools, including a powerful report-generator language. SATURN-BASE interfaces with existing SATURN® products and user-developed systems.

A version of this product is available for the PDP-11 computer.

Price: \$1500 – \$4000

Contact: Becky H. Tighe, Public Relations
(612) 944-2452 or (800) 328-6145
SATURN SYSTEMS, INC.
6875 Washington Avenue S., Suite 218
Minneapolis, MN 55435

SATURN-CALC™

Operating System: VMS

Keywords: • Calculation aids • Decision support
• Financial analysis • Spreadsheets

This electronic spreadsheet package provides an easy and clear way to gather and present data. SATURN-CALC can be used in corporate, scholastic, and scientific applications, such as inventory control, comparing conditions, sales analysis, and magnifying data. System messages, letter-keyed commands, and on-screen help support the user at every step.

SATURN-CALC accepts text and numbers. Thus, files from SATURN-WP can be loaded into SATURN-CALC for processing. SATURN-CALC also interfaces to SATURN-GGRAPH for charts.

A version of this product is available for the PDP-11 computer.

Price: \$489 – \$1956

Contact: Becky H. Tighe, Public Relations
(612) 944-2452 or (800) 328-6145
SATURN SYSTEMS, INC.
6875 Washington Avenue S., Suite 218
Minneapolis, MN 55435

SCSS™ Conversational System

Operating System: VMS

Keywords: • Data base management • Statistics

SCSS conversational computing gives quick responses to data analysis queries, and the statistical capabilities provide accurate output both logically formatted and fully labeled. No previous data analysis or computing experience is required, since SCSS is virtually self-teaching. On-line help facilities and user-selected prompts give a system tutorial, complemented by a training module in cassette and slides that explain both fundamentals of data analysis and SCSS features.

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Used in market research, quality assurance audit analysis, and education and government reporting, SCSS provides many powerful statistical capabilities, including univariate statistics, cross-tabulations, *t*-tests, breakdown, scatter plots, correlations, regression, factor analysis, and more. An efficient system for exploratory data analysis and data management options, SCSS generates new variables and recodes or revises existing variables. SCSS provides sample, selection, and weighting of specific cases and a comprehensive set of data transformations. SCSS also interfaces with the SPSS® Data Analysis System for data and file sharing.

Price: \$3000 – \$8000

Contact: Susan Phelan

(312) 329-2400

SPSS INC.

444 North Michigan Avenue

Chicago, IL 60611

SDS

Operating System: VMS

Keywords: • Data base management • Engineering
• Project management • Query facilities

SDS provides a flexible project data base for storing and manipulating specifications, design structure, interface definitions, milestone plans, resource allocation, interdocument references, product configurations, and build states. SDS uses network data base technology and is well suited to the mapping of relationships between items. For example, the interdependencies of system modules can be recorded using inter-record links, permitting the impact of a design change in one module to be traced quickly through the system.

The flexible SDS Query Language exploits interrecord links to give efficient data access and provides searching and selection with arithmetic and logical manipulation. Design-checking facilities and an activity scheduler are available. SDS assists throughout the design, development, and support life cycle of software and hardware and is applicable to industries in which development projects are undertaken, such as computer systems development, electronics, aerospace, and defense.

Price: £15,000 – £80,000

Contact: R. Weedon

0252 544321

SOFTWARE SCIENCES LTD.

282/292 Farnborough Road

Farnborough, Hampshire GU14 7NB

England

SEED DBMS (Data Base Management System)**Operating System:** MicroVMS, VMS**Keywords:** • Data base management • Data dictionary
• Forms management • Query facilities

This system enables the applications developer to efficiently implement systems that involve complex data base designs, large volumes of data, and high data base transaction rates. SEED uses artificial intelligence-derived techniques to give the end user a relational-view interface into large, complex data bases without taking away the important time-saving efficiencies of SEED's network implementation. SEED provides the following features:

- A comprehensive set of technical tools for applications development, data base performance tuning, and system maintenance.
- Friendly, nonprocedural report and query facilities for end users, managers, and decision makers.
- Entity/relationship information modeling, which encourages sound design. SEED's physical network structure allows the user to build systems that exploit the power of that design.
- Highly efficient methods of data storage and retrieval, tuneable by the DBA for the specifics of the application, actual usage, and the specific hardware installed.
- Different views of the data base for the differing requirements of individual users. These subschema user views provide password-based security protection down to the field and relationship levels, as well as protect programs from additions to both the logical and physical data base designs — providing true data independence.
- Brief, clear, English-like commands in both end user- and developer-targeted SEED processors. Both extensive help facilities and on-line access to data dictionary information throughout the system make applications user friendly and self-documenting.
- Protection from the effort and down time associated with reorganizations, because SEED data bases can expand dynamically as more space is needed.
- Optional use of COBOL, FORTRAN, Pascal, PL/I, and C applications with the same data base.
- Journaling and privacy locks to protect the integrity and security of the data base.

A version of this product is available for the PDP-11 computer.

Price: \$995 – \$68,000**Contact:** Lynn Neiswender

(703) 683-4944 or (800) 428-9400

SEED SOFTWARE CORP.

2121 Eisenhower Avenue

Alexandria, VA 22314

SIR/DBMS

Operating System: ULTRIX-32, VMS

Keywords: • Data base management • Programming tools
• Report writer • Research

SIR/DBMS is a comprehensive high-performance relational data base management system. A coherent and easy-to-learn fourth-generation language allows the user to describe the data base, provide for complete data quality control, and handle any kind of logical data structure — relational, hierarchical, or network.

The retrieval facility lets the information analyst produce simple or complex reports with automatic labels and subtotals; perform simple statistical analyses, including descriptive statistics, frequency tables, histograms, and x-y printer plots; produce camera-ready tabular data displays with automatic titles; and interface directly (through the automatic production of system files) with the statistical packages BMDP, SAS, and SPSS.

The system can be installed in less than an hour, because no operating system modifications are required.

SIR/DBMS runs on a range of mainframes, minis, and micros. In addition, SIR/DBMS data bases can be easily transported from one computer to another.

Related modules include SIR/HOST, the host language interface to SIR/DBMS data bases; SIR/FORMS, a screen-oriented data entry and retrieval system; SIR/SQL+, a relational query language processor; and SIR/GRAPH, an interactive, device-independent business and scientific graphics system.

The system serves clinical trials, contract administration, cancer research, criminology, virology, market research, pharmaceutical research, oceanography, epidemiology, sociological studies, econometrics, computer performance analysis, census data analysis, and many others.

Price: Available upon request

Contact: Director of Sales

(312) 475-2314

SIR, INC.

820 Davis Street, P.O. Box 1404

Evanston, IL 60204

SIR/FORMS

Operating System: ULTRIX-32, VMS

Keywords: • Data base management • Data dictionary
• Data entry • Forms management

This completely integrated module of SIR/DBMS for interactive screen-oriented data entry and query by forms lets you enter, retrieve, delete, or modify data in a SIR/DBMS data base. SIR/FORMS uses the data base schema (data dictionary) for automatic screen design, extensive data quality control, and help texts for operator assistance.

Applications can be implemented quickly. The default menus and screens provided by SIR/FORMS (with a single command) can be easily tailored for a specific application. This easy-to-use system requires no programming to run.

The program runs on computers that support SIR/DBMS and is configured for a variety of terminals. Additional terminal types are easily added.

Price: Available upon request

Contact: Director of Sales

(312) 475-2314

SIR, INC.

820 Davis Street, P.O. Box 1404

Evanston, IL 60204

SIR/SQL +

Operating System: ULTRIX-32, VMS

Keywords: • Data base management • Query facilities
• Report writer • Scientific

SIR/SQL+ is an interactive relational query system that lets users of SIR/DBMS interrogate their data bases, using English-language commands. SIR/SQL+ queries search the data base and automatically display the information requested.

The full power and user friendliness of SQL (IBM's Structured Query Language) are incorporated and extended. In addition to providing the full SQL language, SIR/SQL+ can take advantage of the existing structure of the data to perform retrievals more efficiently than other relational systems. Frequently used queries can be saved as part of the data base.

SIR/SQL+ is equipped with a highly interactive display processor for developing fully formatted reports quickly and easily.

Price: Available upon request

Contact: Director of Sales

(312) 475-2314

SIR, INC.

820 Davis Street, P.O. Box 1404

Evanston, IL 60204

SPIRE Data Base Management System

Operating System: VMS

Keywords: • Data base management • Query facilities

SPIRE is based on a relational model of data bases. The user interacts with the SPIRE DBMS through a CRT or a hard-copy terminal for easy and timely access to data and a full range of retrieval and manipulative capabilities. The SPIRE DBMS will readily accommodate both the new user and the more sophisticated user. The SPIRE system includes a supervisor, which uses a password security procedure to limit user access to the system, to data files, and to commands.

The SPIRE DBMS includes a user-friendly query language known as Query-By-Example (QBE). QBE provides a "user-specific view" in a user-friendly environment along with data retrieval and manipulative capabilities. Through the QBE language, the user interacts with the SPIRE DBMS as though examining and manipulating a set of tables. That is achieved by allowing each user to develop a template for a set of data in terms of the user "view." To the user, the important characteristic of the template is its record layout form. QBE allows each user to have a different "view" of a common set of data. Further, the user may "view" a data base as containing records that are made up of parts of explicit data base records or transformations of explicit data base records, such as a subset of the existing range of values in a given field. QBE also includes two functions; one sums the contents of a numeric field for "data records" satisfying selection criteria, and the other counts the number of "data records" that satisfy a selection criteria.

Price: \$3775

Contact: Customer Support Department
(404) 542-3265

NASA'S COMPUTER SOFTWARE MGT. AND INFO.
CENTER

University of Georgia, 112 Barrow Hall
Athens, GA 30602

SPSS® Data Analysis System

Operating System: VMS

Keywords: • Decision support • Report writer • Statistics

SPSS is an integrated data analysis and statistical reporting tool with applications in business, government and nonprofit organizations, and education. With a full set of documentation, SPSS is easy to learn and flexible to use. A complete range of statistics is available in SPSS: cross-tabulations, aggregations, ANOVA, MANOVA, nonparametric tests, frequency distributions, discriminant, factor analysis, and more. The powerful report generator can list cases, compute summary statistics, and produce customized, camera-ready output. Applications for SPSS include analysis of survey data in marketing research, management of personnel records, reporting in government agencies, monitoring of sales activity as it relates to other operations in business,

matching admissions data with scholastic performance in education, maintaining current customer records in virtually any industry, and others.

Price: \$3000 – \$8000

Contact: Susan Phelan
(312) 329-2400

SPSS INC.
444 North Michigan Avenue
Chicago, IL 60611

SPSS-X™ Information Analysis System

Operating System: ULTRIX-32, UNIX* (Berkeley), VMS

Keywords: • Data base management • File management
• Operations • Statistics

For users of VAX UNIX* systems under VMS 4.1, SPSS-X is a powerful tool for data analysis and management, file handling, system monitoring tracking and reporting, and data display using analytical procedures. Data analysis in SPSS-X takes several forms, from basic cross-tabulations and frequency distributions to advanced procedures such as ALSCAL, MANOVA, BOX-JENKINS, CLUSTER, and PROBIT/LOGIT for estimation of logistic regression models.

SPSS-X can also be used as a teaching tool for quantitative methods in administrative sciences, social sciences, business economics, political science, and other areas. Nonprofit organizations benefit from SPSS-X's CPU efficiency and can take advantage of its report-generation facility. Business managers can analyze sales, perform forecasting models, and share data sets with other popular data base management systems, such as VAX DATATRIEVE.

SPSS Inc. is committed to support and maintenance of its software, and SPSS-X includes a complete set of documentation and teaching tools, a users' newsletter, and both public or on-site training at an additional fee. SPSS-X is regularly updated for performance enhancements and new statistical functions.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: \$4500 – \$10,000

Contact: Susan Phelan
(312) 329-3500

SPSS INC.
444 North Michigan Avenue, Suite 3000
Chicago, IL 60611

STAT80

Operating System: VMS

Keywords: • Data base management • Mathematics
• Report writer • Statistics

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This interactive package is for statistical analysis, data management, report writing, and mathematical and statistical programming. The package can be used by statisticians, economists, financial analysts, business analysts, biostatisticians, medical researchers, chemists, biologists, social scientists, and system and application programmers, as well as by novices.

STAT80's extensive on-line help facility documents all commands. A description of the command, form, options, and examples are included. STAT80 menus describe commands by category: data entry and statistical procedures, for example.

STAT80 contains more than 30 comprehensive statistical procedures, from simple descriptive statistics to factor analysis and complex matrix operations. All statistical procedures enable you to specify selection criteria for performing analysis on a subset or random sample of data.

STAT80 can read data from numerous devices on your computer system into any of six data types. STAT80 allows you to create, modify, and delete variables and to add and delete observations. You can perform any of those transformations in any order, at any time. An extensive collection of functions is available for arithmetic, mathematical, statistical, and trigonometric transformations. STAT80's file management capabilities include appending, sorting, merging, subsetting, and concatenating.

STAT80 enables you to extend the capabilities of the package through a proc facility. A proc is a command you design, using STAT80's proc language, which executes under the control of STAT80. The procs support looping, conditional branching, argument substitution, temporary variables, and internal recursion. For ease of use, the proc language strongly resembles the BASIC programming language. Most STAT80 commands may be executed within a proc.

STAT80 is written in the PFORT subset of FORTRAN.

Price: \$1000 - \$3000

Contact: Angela Hampton

(801) 521-9309

STATWARE

P.O. Box 510881

Salt Lake City, UT 84151

SYSTEM 1032™

Operating System: VMS

Keywords: • Data base management • Query facilities

SYSTEM 1032 offers professional programmers and casual users easy access to data records through an integrated fourth-generation language offering a full range of query, reporting, structured programming options, forms management, and on-line help facilities.

Commands can be used interactively, in stored compiled procedures, or through the Host Language Interface, which works with any language using VAX/VMS procedure-calling standards.

Written in VAX-11 MACRO, SYSTEM 1032 uses a shareable image, reentrant code, and highly optimized bit-efficient data-packing algorithms for key tables and for data records. SYSTEM 1032 takes advantage of such state-of-the-art features as asynchronous I/O to optimize response time. A B-tree structure and inversion on multiple fields allow fast retrieval of data, regardless of the request's complexity or the data base size.

No software limitations restrict the size of data bases. The limiting number of records for each data base depends on the user's hardware configuration. More than 500 fields/record, records over 100K bytes, and fields over 30K bytes are possible. Users can open and use data from multiple data bases in the same SYSTEM 1032 session. Data sets can be configured over different UICs and on different disks or nodes with the appropriate security.

SYSTEM 1032 has been used for solving data management problems for businesses, government agencies, and universities. The system takes less than an hour to install and comes with complete documentation. Examples in the user's guide use a sample data base that is available on the tape for training purposes. The MAGIC FINGERS™ on-line training tool is also available.

Special licensing is available for academic and nonprofit use.

Price: \$15,000 – \$40,000

Contact: Giselle Valdes
(617) 661-9440

SOFTWARE HOUSE
1105 Massachusetts Avenue
Cambridge, MA 02138

TAM (Terminal Access Module)

Operating System: VMS

Keywords: • Data entry • Forms management
• Programming tools

Distribution medium: 9-track 800/1600 bpi magnetic tape.

This transaction-processing front-end module provides a wide range of capabilities for handling data entry, inquiry, and update at CRT terminals. Screen layout, prompting text, field edits, cursor positioning, and so on at the CRT are specified by formats, or sets of statements in a high-level declarative language. The formats are compiled into a library and are then executed under application program control. TAM contains an extensive set of support facilities for creating, modifying, and testing formats.

Applications communicate with TAM by way of the large message send/receive facilities of RSTS/E or with the send/receive and dynamically mapped shared-region facilities of RSX-11M. A transaction-processing application program would, as required, send messages to TAM, saying, in effect, "execute format *x* at terminal *n* and return the record of data collected." The critical-performance portions of TAM are implemented in PDP-11 assembly language as shared code.

Under VMS, the TAM format-execution code consists of a set of procedures called using standard VAX/VMS conventions. Those procedures are linked with the user program image. The TAM VAX-11 MACRO procedures are position independent and are supplied as a shareable image.

A version of this product is available for the PDP-11 computer.

Price: \$6000

Contact: Martha Scott

(617) 861-0670

EVANS GRIFFITHS & HART, INC.

55 Waltham Street

Lexington, MA 02173

THEMIS™ (Management Information System)

Operating System: VMS

Keywords: • Data base management • Decision support
• Office systems • Query facilities

THEMIS, a system for retrieving and sorting data stored in VAX DATATRIEVE data bases, gives the user access to information without coding computer-language requests. THEMIS understands English requests and requires no keywords in context or computer commands. Typical THEMIS applications include personnel, finance, market analysis, manufacturing, and cases in which users need information from a data base quickly.

THEMIS understands a large vocabulary of commonly used English words and allows each user to enter personal definitions supporting alternative meanings for words or phrases. That feature lets each user speak to THEMIS in the terms most relevant to the user's job, even if different users have different meanings for the same word. For example, THEMIS allows clerks to define "payroll" as "wages plus taxes for each employee," whereas management may define payroll as "the sum of all salaries."

Other THEMIS features include spelling correction; use of pronouns to refer to the subject of a previous request; multiple users; ability to print the results of a query and to add, subtract, multiply and divide; ability to calculate percentage, average, maximum, minimum, and total; and the ability to understand words from the context of the question.

Price: \$12,000 – \$24,000

Contact: Susan M. Chittenden
(603) 627-1123

FREY ASSOCIATES, INC.
Chestnut Hill Road
Amherst, NH 03031

Trouble Ticket Reporting System

Operating System: VMS

Keywords: • Maintenance • Statistics • Telecommunications

This system controls and monitors troubles from the time they are reported, as they are tested and dispatched, until they are cleared. The system maintains statistics and provides reports for completed repairs. Each company can determine how many months of information to retain in history for reporting purposes, using its own acronyms, codes, and customer setup. Most criteria and display fields are user defined. The trouble report can be printed at any location determined by the operator during dispatching. Statistics, including indexes, percentages, and elapsed time to clear, are updated monthly.

Uncleared trouble reports in the system can be accessed through an inquiry function for monitoring status. Access to information can be through any field on the trouble ticket, including equipment assignment, dispatch information, status, and the trouble, found, and cause descriptions for the trouble.

Reports can be set up to run on request or automatically with changes to standard reports or new reports developed easily on line.

Each customer or premise trouble history is kept in summary and in detail in both this system and Customer Service Inquiry.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Paul Jorgensen
(206) 456-3535

ALLIED DATA
P.O. Box 2406
Olympia, WA 98507

ULTRA Interactive Data Base System

Operating System: VMS

Keywords: • Application development • Data base management
• Development tools • Programming tools

This system combines practical relational technology and fourth-generation problem-solving tools for your production application environment. Using a new generation of interactive data base technology, ULTRA optimizes the multiple machine/multiple application environment.

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ULTRA provides the control, consistency, and security that are essential for modern application needs. Using ULTRA, companies can build and distribute systems with unprecedented speed and accuracy yet substantially reduce development costs, programming effort, and maintenance requirements.

Applications work with derived relations. The derivation process is specified separately from the application, and the relational algebraic operators (JOIN, PROJECT, SELECT) are automatically performed by the relational software at execution time. Thus, the applications are not dependent on the logical or physical structure of the data base.

ULTRA provides a comprehensive, consistent approach to system building. In a multiple-machine environment with multiple applications, ULTRA provides complete data control and consistency in building and maintaining those systems.

In addition, ULTRA features fourth-generation software, including end-user query and report preparation. That gives inexperienced end users easy access to the computer and eliminates the programming effort of traditional data base technology.

Price: \$49,400 – \$74,900

Contact: Richard French
(513) 662-2300

CINCOM SYSTEMS
2300 Montarra Avenue
Cincinnati, OH 45211

Unibase

Operating System: ULTRIX-32, UNIX* (Berkeley)

Keywords: • Data base management • Query facilities

This powerful, easy-to-use relational data base management system contains a nonprocedural query language, runs on the PDP-11, VAX, and MC68010 systems, and is fully supported. Unibase is also available for most UNIX* systems.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$800

Contact: Dr. Blaine T. Garfalo
(216) 421-8737

DAYSTROM SYSTEMS, INC.
11206 Euclid Avenue
Cleveland, OH 44106

VAX Information Architecture Products

Operating System: MicroVMS, VMS

Keywords: • VAX Information Architecture

The VAX Information Architecture encompasses a style and method of design that enables various software products to integrate and work with one another across the spectrum of VAX computers — from the MicroVAX to the VAX 8600 and VAXclusters. This software architecture is designed to improve the productivity of individuals, whatever their occupation and level of expertise. Users can choose the components they need today and can add new capabilities as their needs grow, at the same time protecting their initial investments in computer technology.

The VAX Information Architecture Products are as follows:

- ACMS (Application Control and Management System) — Software tools for the development, control, and maintenance of complex on-line applications, including transaction processing applications
- CDD (Common Data Dictionary) — The central storage facility for data definitions used by VAX Information Architecture products and a growing number of VAX languages
- DATATRIEVE — A query and report-generating system
- DBMS (Data Base Management System) — A multiuser, general-purpose CDDASYL-compliant data base management system
- FMS (Forms Management System) — A terminal-management package that is compatible with FMS software on PDP-11s and Professional microcomputers
- Rdb/VMS (Relational Data Base Management System)
- TDMS (Terminal Data Management System) — A record-level forms display and data management system
- VALU — An optional component to VTX
- VTX — A videotex system for the office environment

Price: Available upon request

Contact: Consult your local DIGITAL sales office (see Introduction).

VISOR (VAX Information System with On-Line Retrieval)

Operating System: VMS

Keywords: • Data base management • Query facilities
• Text management

VISOR, developed by the University of Waikato, is a powerful yet simple user-oriented data base system for capturing and referencing textual data. The system can be used for bibliographies, library references systems, and mailing lists:

- As a bibliography system, VISOR aids in preparing theses and research papers. Bibliographies can be maintained, selected, referenced, sorted, and printed.

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- Libraries, both personal and departmental, benefit from VISOR's ability to provide easy reference, search, and selection of books, journals, and research papers. Powerful search algorithms operate on any combination of fields in the data base, such as a keyword field.
- Mailing lists can be searched, printed, and so on, based on internal criteria, and labels can be printed from all or any part of the data base.

Data entry and modification are handled with a full-screen editor that takes advantage of the DIGITAL VT100 and VT220 capabilities, including field scrolling on portions of the screen. Commands to the editor follow DIGITAL conventions, using the numeric keypad. Extensive user documentation and on-line help facilities make the system easy to use. Discounts for multiple CPUs and sites are available.

Price: \$3000 - \$5000

Contact: John Mikle

(408) 395-0633

ENZED SYSTEMS

336A Village Lane

Los Gatos, CA 95030

WATFILE Data Management Systems

Operating System: VMS

Keywords: • Data base management • Decision support

Distribution medium: 9-track 1600 bpi magnetic tape.

This interactive, command-oriented package, developed by WATCOM Systems Inc., helps the inexperienced programmer organize and manage data files. Most operations require only a few commands. More complex and powerful operations are possible through more than 50 commands in the system. The interactive data entry and editing provides for simple intuitive data preparation and modification. File-manipulation commands combine power with simplicity. Files may be stored, retrieved, erased, or renamed.

WATFILE can be used as a mailing-list system for maintaining and printing labels. Files can be sorted, merged, combined, and/or summarized according to key fields. Fields can be dynamically added, removed, expanded, or contracted. Commands allow character, arithmetic, and logical calculations on all or selected records in a file. The MEMORIZE facility enables the system to remember series of commands as they are entered. Simple reporting facilities and built-in calculator functions are provided.

The WATFILE Data Management System is written in Waterloo Systems Language.

Price: \$900 – \$3600

Contact: Jean Steffensen
(519) 886-3700

WATCOM PRODUCTS INC.
415 Phillip Street
Waterloo, Ontario N2L 3X2
Canada

X-AMPLE

Operating System: VMS

Keywords: • Data base management • Data dictionary
• Query facilities • Report writer

Distribution media: disk, magnetic tape.

X-AMPLE, a menu-driven relational data base management system that contains a data base manager, a query tool, a report generator, and a command data dictionary, can handle 500 data bases, 500 entities within each data base, 1000 attributes within each entity, and unlimited data for each attribute. All technical issues — for example, access paths, storage mechanisms, and data restatement — are embedded in the system. Users need no data processing experience, and they do not have to learn a command language. Relationships between entities can be created any time, and entities to be related do not have to contain common data.

Price: \$10,000 – \$20,000

Contact: Carol Ryan, Marketing Director
(201) 722-5100

LANDMARK SOFTWARE SYSTEMS, INC.
155 W. Main Street
Somerville, NJ 08876

X-CELL

Operating System: VMS

Keywords: • Data base management • Report writer

Memory required: 64KB. Distribution media: RX01, RX02.

This user-friendly data base management system that runs on DIGITAL's LSI-11 and PDP-11 family of mini- and microcomputers allows the user to define and allocate field space for any combination of alphanumeric and numeric entries. Each field is given a title up to 30 characters in length. The user may define up to 30 fields a record. The number of records is limited to the available disk space. Records may be defined to be from 1 to 256 bytes in length. Numerical fields can be mathematically defined by equations that are functions of the values of other numeric fields.

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X-CELL comes with search and sort capabilities that allow for inclusive and exclusive retrievals and sorts by as many as 15 fields at the same time. The retrieved and/or sorted data may be displayed on the video or the line printer, using any format defined by the X-CELL report generator.

X-CELL comes with a report generator that allows the user to define and build report formats that can be saved and modified as needed. The two basic format types are MEMO, which is used for form letters and other fill-in-the-blank-style reports, and HEADER, which is a column-oriented report. The HEADER-style format also does summations and averages of numerical columns.

X-CELL comes with an input and modify editor that allows for new records to be defined from existing records. The editor also allows for quick modifies and inputs by means of a direct field pointer that allows users to go directly to any field that they wish to edit and to leave editing anywhere within the record.

X-CELL allows for easy switching from one data base to another. An unlimited number of data bases can be accessed.

X-CELL generates documentation for each data base, defining the fields, their titles and lengths, and examples of all report formats defined for the data base. The documentation gives all equations used to define numerical entries.

X-CELL requires RT-11 with BASIC and a VT100 or compatible terminal.

A version of this product is available for the PDP-11 computer.

Price: \$250

Contact: Phyllis Collins, President
(617) 822-3173
INDECS SERVICES
9 Pinecrest Drive
Taunton, MA 02780

XDE (Data Entry and Edit System)

Operating System: ULTRIX-32, VMS

Keywords: • Data entry • Data base management
• Forms management

This system is comprised of two programs that are selectable from the XED menu processor: the XFG form generator program for creating forms and the XDE data entry/edit program for building a data base. Pure data entry is done key to disk, similar to standard keypunch operations. Printing utilities allow formatted data to be printed with or without background text.

XFG allows the user to create a form template and to define the parameters for its use. Definitions include operator, computer, and list entry; entry from calculation, cross-field, numerical, or character string; format and character masking; key field; key field prompt; blanked fields; operator or supervisor override; and verification by dual-entry, sight, range, or list matching.

XDE allows records to be created, updated, modified, and printed and provides spreadsheet abilities. Unlimited records may exist in each file. Each record may contain up to 500 fields, and each field may contain up to 64 characters of data. The XDE system provides a bridge for passing information between large data base management systems and the XED word processor. The system can also be used as a user-friendly front end for the data base manager.

XED office system programs are designed and coded for UNIX* Version 7, System III, System V, and Berkeley 4.1 and 4.2 to provide maximum installation flexibility and efficiency in a multiuser environment.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Ted Ferguson
(818) 884-2000

COMPUTER METHODS, LTD.
P.O. Box 3938
Chatsworth, CA 91313

XENTIS/Report

Operating System: VMS

Keywords: • Data dictionary • Query facilities • Report writer

This report writer and query system provides, by means of an interactive dialog with intelligent defaults and on-line help, an easy and fast method of selecting, sorting, and formatting information from any application package using RMS on a VAX computer. XENTIS/Report allows the user to create command files so that all responses to a session may be saved. A save-selected-records function puts the address of selected data records into a file for quick retrieval by either XENTIS or a user-written program. Other features include extensive format control, multilevel security, conditional calculations, and logical, arithmetic, and comparison operations. The XENTIS data dictionary can accommodate other data management tools being developed by the company.

Optional features include file/record generation, interfaces to a variety of word processing and spreadsheet/financial modeling packages, and a companion product, FIS/FMS, designed to work with applications developed by NCA Corporation, Manus, and Transcomm Data Systems.

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Price: \$3000 – \$7000

Contact: Peter J. Avenali
(206) 284-4025
PARK SOFTWARE
P.O. Box 202, Northgate Station
Seattle, WA 98125

Xerox Business Management System

Operating System: VMS

Keywords: • Accounting • Distribution
• Financial management • Manufacturing

The Xerox business applications for DIGITAL hardware supply end-user business requirements for the manufacturing and distribution industries. The applications are flexible and can function in varied environments.

The applications function on line and interactively. Information is entered through screens and is instantaneously validated, acted on, or accepted as screen entries are made. A rich set of on-line inquiries is available to display the latest status of critical information at any time. The applications were designed with management control and auditability in mind.

This system consists of three application sets: Xerox Manufacturing System, with file maintenance, capacity planning, engineering data control, master scheduling, purchase order, inventory control, factory order control, and material requirements planning (MRP); Xerox Distribution System, with file maintenance, inventory control, accounts receivable, sales analysis, purchase order, and order entry; and Xerox Financial System, with file maintenance, fixed assets, payroll, accounts receivable, accounts payable, general ledger, and purchase order.

Price: \$8000 – \$150,000

Contact: Fred Korn
(609) 424-3600
XEROX COMPUTER SERVICES
26 Springdale Road
Cherry Hill, NJ 08003

XPlan Plus

Operating System: VMS

Keywords: • Spreadsheets

This powerful spreadsheet program is used in all markets for spreadsheet applications. XPlan can handle from 350 items to 50,000 items and can produce typed reports. XPlan Plus is limited to BASIC-PLUS and VAX/VMS BASIC.

A version of this product is available for the PDP-11 computer.

Price: \$399 – \$499

Contact: M. Stewart
(441) 897-9731 ext. 17
XPLAN CORP.
P.O. Box 327
London, W44QD
England

the firm's production function, the firm's demand for capital, and the firm's demand for labor. The firm's demand for capital is derived from the firm's production function and the firm's demand for labor is derived from the firm's production function and the firm's demand for capital.

Insurance



Owen Franken/Stock, Boston

Easypost Insurance Agency Management System

Operating System: ULTRIX-32, VMS

Keywords: • Billing • Financial planning
• Information management

Memory required: 128K. Distribution media: 5¼" or 8" diskettes.

This system, written in RM COBOL and developed by Advanced Business Systems, Inc., is a comprehensive, computer-based information system that offers agents complete control of their businesses. This program is continually upgraded, using the suggestions of industrial professionals, such as agents, accountants, and computer specialists. Easypost provides efficient customer service by offering easy access to customer information. A report is available, listing current customers with a potential for increased sales, thus improving a company's marketing strategy. The system automates daily and monthly accounting procedures by using standard accounting practices. This system also improves management and administrative decisions through such reports as Receivables Aged Analysis, Claims Status Register, Producer Production, Direct Bill, and Premium Finance Status.

A version of this product is available for the PDP-11 computer.

Price: \$4000

Contact: Bob Ginn

(901) 767-3759

INDUSTRY SOFTWARE SALES, INC.

P.O. Box 240804

Memphis, TN 38124

Insurance Agency Package

Operating System: VMS

Keywords: • Accounts payable • Accounts receivable
• General ledger • Sales analysis

This comprehensive system for the small to medium-size insurance agency handles the complete accounts receivable, accounts payable, and general ledger requirements of the agent, together with premium, commission, and sales analysis reports.

A version of this product is available for the PDP-11 computer.

Price: \$5000 - \$10,000

Contact: Nigel Harris

(613) 829-8888

HARRIS COMPUTER SYSTEMS

16 Credit Union Way

Nepean, Ontario K2H 8R6

Canada

MCMS (Medical Claims Monitoring System)

Operating System: UNIX* (Berkeley)

Keywords: • Audit • Data base management
• Financial analysis • Medical

Memory required: 512K. Distribution medium: magnetic tape.

MCMS, written in C, provides a health care claims payer with a cost-containment tool that evaluates the financial, clinical, and utilization reasonableness of hospital claims. MCMS is based on the DRG technology that Health Systems International developed for HCFA (Medicare). MCMS provides hospital- and DRG-specific high/low charge profiles for total charge, room/board charges, and ancillary charges. In addition, MCMS flags clinical inconsistencies, such as conflicts between diagnoses, procedures, age, and sex; and screens for utilization problems, such as questionable admissions, unreasonable length of stay, and Monday discharge. Finally, MCMS stores the information entered and created in the MCMS data base, which can be accessed through a set of standard reports or through the IDQ writer.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: Available upon request

Contact: Walter Wieners
(203) 562-2101

HEALTH SYSTEMS INTERNATIONAL
100 Broadway
New Haven, CT 06511

THE CHINESE

The Chinese population of the United States is estimated to be about 100,000. They are found in all parts of the country, but are most numerous in the West. They are engaged in all kinds of occupations, but are especially noted for their skill in the arts and crafts. They are also known for their industry and frugality. The Chinese have made many contributions to the progress of the United States, and their presence is a valuable asset to the nation.

The Chinese have a long and rich history, and their culture is one of the most ancient and civilized in the world. They have made many contributions to the world of science, art, and literature. Their language is one of the most beautiful and expressive in the world, and their art is one of the most refined and elegant. The Chinese have a deep respect for their ancestors and their traditions, and they are proud of their heritage.

Language Processors



Robert Pyle

80/DS (PL/M-80) (Development System)

Operating System: ULTRIX-32, UNIX* (Berkeley, System III, System V), VMS

Keywords: • Assemblers • Compilers • Cross-compilers
• Microprocessor development

This integrated tool set for developing Intel 8080/8085 and Zilog Z80 software in both PL/M and assembly languages consists of:

- The 80/PC Compiler, which compiles source modules written in the 80/PL language (an upwards-compatible extension to the PL/M-86 language). Object modules are produced in the Intel MCS-80/85 Relocatable Object Module Format.
- The 80/AS Assembler, which is generally compatible with the Intel 8080/8085 Assembly Language and produces object modules in the Intel MCS-80/85 Relocatable Object Module Format.
- The 80/RL Relocation and Linking Tools, which combine relocatable object modules into absolute object modules for down-loading to the target machine or to an emulator.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: £5200

Contact: G. C. Evans

44-(438) 316311

WARREN POINT INTERNATIONAL, LTD.

Babbage Road

Stevenage, Herts SG1 2EQ

England

86/PC (PL/M-86) Compiler

Operating System: ULTRIX-32, UNIX* (Berkeley, System III, System V), VMS

Keywords: • Compilers • Cross-compilers
• Language enhancers • Microprocessor development

The 86/PC Compiler supports the 86/PL language and produces object modules for execution on the Intel 8086, 8088, and 80186 microprocessors. Object modules are produced in the Intel MCS-86 Relocatable Object Module Format.

The 86/PL language is a superset of the PL/M-86 language, and most PL/M-80 and PL/M-86 source modules should compile and execute without modification.

The 86/PL Compiler contains a number of extensions to PL/M-86, including relaxation of restrictions on the ordering and factoring of items in DECLARE statements, introduction of structures within structures, introduction of explicitly based references, use of HIGH

and LOW built in as assignment targets, introduction of a fully delimited IF block construct and an UNDO statement, and introduction of a new scope for external data and procedures so that external items declared in an included file may be redeclared within a module.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: £4700

Contact: G. C. Evans

44-(438) 316311

WARREN POINT INTERNATIONAL, LTD.

Babbage Road

Stevenage, Herts SG1 2EQ

England

Abacus

Operating System: VMS

Keywords: • Interpreters • Mathematics • Programming tools
• Scientific

Memory required: 40KB. Distribution medium: magnetic tape.

This mathematical language works as a parser/compiler interpreter to aid both expert and novice computer users in interactive formula programming. Errors and results are displayed on a video terminal in machine-user dialog. No previous knowledge of the computer is required. The language strictly follows the mathematical representation of formulas and guides the user. For example, if a formula contains symbolic names, the program inquires for their numerical values. The main elementary functions and second-degree equation solutions are provided with constants, such as PI. Temporary storage and plotting facilities are included. A set of the main unit conversions is built in. External file compilation with loop statements provides frequently used formula definitions. All those facilities provide a powerful tool for scientists, computer programmers, and technicians in computing and developing systems.

Documentation is on magnetic media. DECUS number VAX-64.

Price: \$5 - \$225

Contact: DECUS (see Introduction)

ACTI 68000 Assembler and Linker/Librarian

Operating System: UNIX* (Berkeley), VMS

Keywords: • Assemblers • Microprocessor development

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This assembler, which translates standard Motorola assembly language into relocatable code, includes symbolic addressing, forward references, expression evaluation, macro facilities, and conditional assembly. The ACTI Linker/Librarian handles linking, locating, and library maintenance; accepts object modules or object libraries in relocatable format; and produces absolute or relocatable output.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: Available upon request

Contact: Robin Fosheim

(313) 769-9055

ADVANCED COMPUTING TECHNOLOGIES, INC.

325 E. Eisenhower Parkway, Suite 108

Ann Arbor, MI 48104

ACTI C Cross-Compiler for the MC68000

Operating System: UNIX* (Berkeley), VMS

Keywords: • Cross-compilers • Debugging

• Microprocessor development

This cross-compiler generates highly efficient, compact object code for embedded 68000 microprocessors. State-of-the-art error-recovery techniques ensure precise, helpful diagnostics. Trivial syntax errors are corrected in addition to being flagged. ACTI C is compatible with the Kernighan and Ritchie definition and includes a preprocessor. The I/O library contains all the UNIX* V.7 routines and is supplied in source code as a standard feature. Library routines are royalty-free. The license fee for ACTI C includes one year of software support. Benchmarks are available on request.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: Available upon request

Contact: Robin Fosheim

(313) 769-9055

ADVANCED COMPUTING TECHNOLOGIES, INC.

325 E. Eisenhower Parkway, Suite 108

Ann Arbor, MI 48104

Ada Compiler

Operating System: VMS

Keywords: • Compilers • Cross-compilers

The Ada compiler compiles the full Ada language as specified by ANSI/MIL-STD 1815A for the VAX line of equipment. The compiler features portability, can be modified for use as a cross-compiler, and is feasible even for computers with a limited amount of directly addressable memory. The compiler is written in a subset of Ada and is ported to a new processor by a subset Ada compiler written in Pascal.

Extensive documentation is available. The compiler is not available directly to end users, but inquiries from equipment manufacturers, OEMs, and distributors are invited.

Price: Available upon request

Contact: George Finckenor

(212) 696-3600

ADVANCED COMPUTER TECHNIQUES

16 East 32nd Street

New York, NY 10016

Ada™/Ed

Operating System: VMS

Keywords: • Compilers • Interpreters • Translators

Memory required: 2MB.

This translator is a complete implementation of ANSI Ada (MIL-STD 1815A, Feb. 1983) and serves as an operational semantic definition of the language. The translator is also an aid in Ada training programs, due to its extensive error message facility and syntax- and semantic-checking provisions.

The ANSI Ada/Ed Translator/Interpreter is written in SETL, a high-level program specification language. The Translator/Interpreter translates Ada source programs into an intermediate code that is then executed in an interpretive mode. ANSI Ada/Ed is designed to execute on a VAX-11/750-780 system under VMS Version 3.1.

Features of ANSI Ada/Ed include correction of all software bugs formally reported to CENTACS through the Ada/Ed Software Trouble Report Form (copy included with each purchase) by users of all previous versions and approximately 10% faster compilation of Ada programs than in the prior versions.

Ada™ is a trademark of the U.S. Department of Defense.

Price: \$595

Contact: Walter Finch

(703) 487-4807

NATIONAL TECHNICAL INFORMATION SERVICE

5285 Port Royal Road

Springfield, VA 22161

AIS-PL/I Compiler

Operating System: VMS

Keywords: • Compilers • Language enhancers

• Source code control

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This PL/I compiler is well suited for traditional numeric applications, as well as for those with extensive file processing and considerable non-numeric data. The features of AIS-PL/I permit rapid and straightforward development of programs that can easily be documented and maintained.

A large subset of ANSI Standard PL/I (X3.53-1976), AIS-PL/I provides numeric data types and operators, bit and character string-handling facilities, a variety of storage classes and data structures, a comprehensive I/O interface, extensive error reporting, and the standard PL/I program-control structures. AIS-PL/I is a true compiler, generating reentrant and recursive object code that is linked to needed support subroutines. Both the support and application routines may be shared among user tasks.

A version of this product is available for the PDP-11 computer.

Price: \$695 - \$5200

Contact: Elizabeth Epermanis
(919) 942-7801

APPLIED INFORMATION SYSTEMS, INC.
500 Eastowne Drive, Suite 207
Chapel Hill, NC 27514

AMGS (Automatic Microcode Generation System for the VAX-11/780)

Operating System: VMS

Keywords: • CAD/CAM • Compilers • Development tools
• Microprocessor development

This system, written in Pascal, facilitates the development of user microprograms for the VAX. AMGS is used with the User Writeable Control Store (WCS) hardware option for the VAX-11/780 processor and the microprogramming tools software package, both available from DIGITAL.

Substantial performance improvements result from the "firmware assists" to aid application problems. Development and maintenance costs of microprograms are reduced to the levels associated with higher-level language application programs. Programmers require no special training, yet AMGS improves the productivity of programmers already familiar with VAX microprogramming. The ease and speed in developing working microprograms permit experimentation with the most productive use of the User WCS. Embedding parts of a proprietary software applications package in firmware secures against unauthorized copying or use.

Programming is done in a higher-level language (HLL) similar to FORTRAN and Pascal. The AMGS interface program performs all required microprogram setup and linkage, enabling user application programs to invoke the microprogram through a standard subroutine call. AMGS integrates with the DIGITAL-supplied microassembler

and loader. Generated microprograms run on the VAX/VMS operating system, and long-running microprograms do not adversely affect normal system operation. Generated microprograms are interruptible, handle page faults transparently, use the FPA to perform floating-point computations for maximum speed, and are reentrant, enabling concurrent use by different application programs or processes.

Price: \$12,500 – \$15,000

Contact: Erwin H. Warshawsky
(714) 974-2201

JRS RESEARCH LABORATORIES, INC.
202 West Lincoln Avenue, Suite A
Orange, CA 92665

Animator

Operating System: VMS

Keywords: • Compilers • Debugging • Programming tools
• Source code control

Animator is a unique visual programming tool for the development and maintenance of ANSI '74 COBOL programs. Animator displays the source of the program on the screen and moves the cursor from statement to statement as each statement is executed. Access is provided to a full range of debugging commands.

A version of this product is available for the PDP-11 computer.

Price: \$800

Contact: Andy Pope or Stacy Beard, Technical/Customer Support
(415) 856-4161

MICRO FOCUS INC.
1860 Embarcadero Road #235
Palo Alto, CA 94303

APL

Operating System: VMS

Keywords: • Interpreters • Language enhancers
• Mathematics • Programming tools

Distribution medium: magnetic tape.

APL (A Programming Language) is a mathematically structured interactive programming language that contains many functions that operate on numbers, vectors, and arrays of arbitrary order. APL has been applied to both scientific and business applications. APL supports the standard ASCII-type terminals as well as terminals that have the special APL character set and can process the overstrike required for true APL terminals.

Documentation is on magnetic media. DECUS number VAX-31.

Note: This relatively complete yet partial implementation of APL contains minor bugs.

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Price: \$5 – \$225

Contact: DECUS (see Introduction)

APL

Operating System: MicroVMS, VMS

Keywords: • Debugging • Interpreters • Programming tools

Distribution media: 9-track 1600 bpi magnetic tape, RX01, RX50, TU58 DECTape II cartridge.

APL (A Programming Language) is a concise programming language that simplifies the handling of numeric and character data organized as lists and tables. A native-mode, shareable, reentrant interpreter, VAX APL provides a built-in function editor, debugging aids, system communication facilities, grouping, and a file system. VAX APL can execute lines of code immediately or can store it for later execution. The interpreter uses virtual memory to create a workspace that can expand dynamically as needed and uses the VAX floating-point and character string instructions. VAX APL can be used for a wide range of applications.

Refer to SPD #25.31.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$797 – \$11,950

Contact: Consult your local DIGITAL sales office (see Introduction).

APL-11

Operating System: VMS

Keywords: • Interpreters • Mathematics • Programming tools
• Simulation

Memory required: 40K bytes.

APL-11 is an interpreter for the APL language, a mathematically structured programming language that features many functions that operate on arrays of arbitrary order. APL-11 is used as a general data processing language as well as a mathematical tool. APL can define recursive procedures that use local variables. The special APL character set can be used on a terminal that supports it or can be simulated with mnemonic escape sequences on non-APL terminals. The user can interact with the APL interpreter to examine and change variables, alter statements without recompilation, and trace program action.

The following documentation is not on the magnetic media: *APL-11 Programmers Reference Manual* and *Installation Guide/Release Notes*. Both are available from DIGITAL (QJ908-GZ).

APL-11 for RSX-11 V2.1 has been run in compatibility mode on the VAX but is known to have a problem with terminal I/O coming out double-spaced. This RSX-11 version of APL-11 has updated sources on it (V2.1).

Documentation is on magnetic media. DECUS number 11-SP-25.

A version of this product is available for the PDP-11 computer.

Price: \$5 - \$225

Contact: DECUS (see Introduction)

AUTOVAX

Operating System: VMS

Keywords: • Data conversion • Source code control
• Translators

This system, written in VAX BASIC, enables RSTS/E users to run BASIC-PLUS programs under VMS. AUTOVAX carries out a textual conversion of a BASIC-PLUS source program into VAX BASIC and replaces the BASIC-PLUS OPEN, GET, and PUT commands with special functions to enable the BASIC-PLUS program to use RMS. The VAX BASIC programs that result run in native mode under VMS. The VAX BASIC program's origin is detectable only by considerations of BASIC-PLUS programming style or by the use of a file handler specific to BASIC-PLUS.

Except where minor manual manipulation of source text is necessary, AUTOVAX is essentially automatic. AUTOVAX indicates such incidences, and the documentation describes the manipulation procedure. A subset of AUTOVAX analyzes the programs to be converted and indicates the degree of manual intervention required, thus providing a cost estimate of the conversion.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Barry Evans

(0902) 712912

CENSUS COMPUTER SERVICES LTD.

Kings House, St. Johns Square

Wolverhampton, WV2 4DT

England

AVL

Operating System: ULTRIX-32, UNIX* (Berkeley, System III, System V)

Keywords: • Compilers • File management • Networking

Distribution media: phone lines (uucp), magnetic tape.

This fourth-generation applications implementation language for rapid prototyping and product development is similar in syntax to C but similar in data type to MUMPS. Functions are dynamically loadable, and program variables may be designated as disk resident, allowing permanent storage and sharing among multiple processes. Many tree-walking functions facilitate manipulation of data. A variable may be an arbitrarily subscripted array, such as a [1,"string",4], and each node may have a value.

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A source-level debugger, a data-directed editor, a large run-time library, many utility programs, and extensive documentation are included.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$1200

Contact: William J. Ezell
(603) 883-9300

SOFTWARE INNOVATIONS, INC.
440 Amherst Street
Nashua, NH 03063

BASIC

Operating System: MicroVMS, VMS

Keywords: • Application development • Compilers
• Debugging • Programming tools

Distribution media: 9-track 1600 bpi magnetic tape, RX01, RX50, TU58 DECTape II cartridge.

VAX BASIC is an interactive shareable language processor for the VAX/VMS and MicroVMS operating systems and takes full advantage of the VAX floating-point, decimal, and character instructions. VAX BASIC provides a high-performance program-development environment for both applications development and timesharing by generating in-line VAX native-mode instructions. The interactivity of immediate-mode program debugging is combined with the power of a structured programming language integrated with key components of the VAX Information Architecture.

Refer to SPD #25.36.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$531 - \$7950

Contact: Consult your local DIGITAL sales office (see Introduction).

Basic-L

Operating System: ULTRIX-32, UNIX* (Berkeley, System III, System V)

Keywords: • Compilers • Programming tools • Translators

Distribution media: phone lines (uucp), magnetic tape.

This language processor translates Basic-L code into C, which is then compiled. The Basic-L language is a hybrid of BASIC and C and combines the safety features of BASIC with the advanced control structures of C.

The Basic-L language includes BASIC-style string and matrix manipulation, subscript checking, and GOSUB constructs with C-style if statements; while, do, and for loops; and functions. Basic-L uses regular UNIX* files, with no record structure imposed.

Basic-L and C functions may be linked into one executable program. All the facilities of the C preprocessor are available in Basic-L. The package includes a run-time library.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$200 - \$275

Contact: Marta Greenberg
(603) 883-9300

SOFTWARE INNOVATIONS, INC.
440 Amherst Street
Nashua, NH 03063

BASTOC (BASIC to C)

Operating System: UNIX* (System III, System V), VMS

Keywords: • Compilers • Language enhancers
• Pre- and postprocessors • Translators

BASTOC converts BASIC programs to C, permitting them to be maintained and enhanced by the UNIX* software development tools. In addition to its use as a conversion aid, BASTOC is a conventional BASIC compiler when used with a C compiler. Most UNIX*-based systems provide a C compiler. BASTOC can be configured as a preprocessor to the C compiler to provide a complete BASIC compiler.

BASTOC is flexible. The modular translator contains more than two dozen user-configurable options. The default dialects of BASTOC are Microsoft BASIC or CBASIC, but the user can tailor BASTOC to the local version by editing the configuration file provided with the package. The user may even configure multiple BASTOC translators if several versions of BASIC are to be supported on one system.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$350 - \$15,000

Contact: Deborah A. Fullam, Technical Staff Member
(215) 628-0846

JMI SOFTWARE CONSULTANTS
P.O. Box 481
Spring House, PA 19477

Bcc Compiler

Operating System: ULTRIX-32, UNIX* (Berkeley)

Keywords: • Compilers • Debugging • Language enhancers
• Programming tools

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The Bcc Compiler finds run-time errors in programs. Bcc is used like an ordinary compiler, but the generated program has sophisticated built-in run-time checks, including array index or pointer out of bounds, illegal use of null pointer, access to deallocated storage, and uninitialized pointer. High-level checks are included for library functions.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: \$6950 – \$9950

Contact: Sam Kendall

(212) 243-8700

DELFT CONSULTING CORP.

432 Park Avenue South

New York, NY 10016

BLISS-16 Implementation Language

Operating System: VMS

Keywords: • Compilers • Cross-compilers
• Language enhancers • Programming tools

Distribution media: 9-track 1600 bpi magnetic tape, RX01, TU58 DECTape II cartridge.

VAX BLISS-16 is a high-level systems implementation language for the development of operating systems, compilers, run-time system components, data base and file systems, communications software, and utilities for use on PDP-11 hardware systems. An advanced set of language features supports development of modular software according to structured programming concepts. Access to many of the hardware features of the PDP-11 is provided in order to facilitate programming of real-time and/or hardware-dependent applications.

The BLISS-16 cross-compiler runs in native mode under the VAX/VMS operating system. This cross-compiler translates BLISS-16 source programs into relocatable PDP-11 object modules optimized for time and space efficiency.

Refer to SPD #25.19.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$5500

Contact: Consult your local DIGITAL sales office (see Introduction).

BLISS-32 Implementation Language

Operating System: MicroVMS, VMS

Keywords: • Compilers • Cross-compilers
• Language enhancers • Programming tools

Distribution media: 9-track 1600 bpi magnetic tape, RX01, RX50, TU58 DECTape II cartridge.

A high-level systems implementation language for VAX, VAX BLISS-32 supports development of modular software according to structured programming concepts by providing an advanced set of language features. BLISS-32 provides access to most of the hardware features of the VAX systems to facilitate programming of real-time and/or hardware-dependent applications. BLISS-32 is especially intended for the development of operating systems, compilers, run-time system components, data base file systems, communications software, and utilities for use on a VAX hardware system.

Refer to SPD #25.12.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$578 – \$8665

Contact: Consult your local DIGITAL sales office (see Introduction).

BSO/C Compiler

Operating System: ULTRIX-32, VMS

Keywords: • Compilers • Microprocessor development
• Programming tools

This compiler offers the microprocessor system designer a powerful optimizing compiler that permits fast program creation and the adept handling of specialized microprocessor hardware/software interfacing. The compiler features a multiuser system, strong optimization features, separate compilation, include statements, linkage with assembly language modules, ROM/RAM memory segregation, and extensive interrupt-handling instructions.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Sales Department
(617) 894-7800 or TWX: (710) 324-0760
BOSTON SYSTEMS OFFICE, INC.
469 Moody Street
Waltham, MA 02254-9164

BSO/Pascal Compiler

Operating System: ULTRIX-32, VMS

Keywords: • Compilers • Microprocessor development
• Programming tools

This is the first compiler designed specifically for microprocessor software development. The product offers the microprocessor system designer a powerful optimizing compiler that permits fast program creation and the adept handling of specialized microprocessor hardware/software interfacing. Features include ISO Standard conformance, multiuser capability, optimization, separate compilation, and an include statement.

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The compiler can be linked with BSO/C or BSO/Assembler object modules, offers strong type checking for accurate programs, has ROM/RAM memory segregation and extensive interrupt-handling instructions, and has special variables to permit easy handling of record files.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Sales Department

(617) 894-7800 or TWX: (710) 324-0760

BOSTON SYSTEMS OFFICE, INC.

469 Moody Street

Waltham, MA 02254-9164

C

Operating System: MicroVMS, VMS

Keywords: • Compilers • Development tools • VNX

Distribution media: 9-track 1600 bpi magnetic tape, RX01, RX50, TU58 DECTape II cartridge.

VAX C is an extended implementation of the C programming language developed at Bell Laboratories. The VAX C compiler runs under the VAX/VMS and MicroVMS operating systems and generates optimized, shareable, and position-independent code.

As a native-mode VAX language, VAX C is integrated into the VMS Common Language Environment. All VAX system services are thus available to programs written in VAX C. VAX C supports VAX Record Management Services (RMS), including sequential, relative, and indexed file organizations and associated access methods, in addition to the stream file access conventional among most C implementations. VAX C programs can invoke, as functions, modules written in other VAX languages. Additionally, programs written in VAX C generate complete debug and traceback records for use with the VAX Symbolic Debugger. The debugger allows the C programmer to set breakpoints, examine and modify the contents of user variables, and selectively halt or continue program execution.

Refer to SPD #25.38.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$473 - \$4725

Contact: Consult your local DIGITAL sales office (see Introduction).

C Language System in RT-11 Format

Operating System: VMS

Keywords: • Compilers • Programming tools
• Software utilities

Memory required: 56KB.

This tape contains the C Language System, Second Master Release Version of November 1983, the same information contained on the tape for DECUS number 11-SP-18. The information has been repacked from the DOS format of 11-SP-18 into an RT-11-compatible format. The files from each of the 14 DOS (UIC) accounts are in RT-11 logical disk files. The files from DOS (5,1) are in the RT-11 LD file 501.DSK. The logical disk files are all full, with the largest being 3179 blocks and the smallest being 159. See the catalog listing of 11-SP-18 for further information. DECUS number 11-SP-68.

Restrictions: DECUS C supports a subset of the current version of C. Minor problems may be encountered in converting from other dialects of C.

A version of this product is available for the PDP-11 computer.

Price: \$5 - \$225

Contact: DECUS (see Introduction)

C Language System, Second Master Release

Operating System: VMS

Keywords: • Compilers • Microprocessor development
• Programming tools • Software utilities

Memory required: 28K words.

C is a general-purpose programming language well suited for professional use. The DECUS C distribution contains a complete C programming system, including:

- A compiler for the C language. The entire language is supported except macros with arguments, bit fields, enumerations, and structure assignments.
- A common run-time library (standard I/O library) for C programs running under the RSX-11 or RT-11 operating systems. By using this library, C programs may be developed on one operating system for eventual use on another.
- A RSTS/E extensions library for accessing all RSTS/E executive services.
- An RSX-11/M extensions library for accessing all RSX-11M executive services.
- More than 20 C programs, including a cross-reference lister for C programs, a lexical analyzer program generator, cross-assemblers for several microcomputers, and several games.
- Extensive documentation for the compiler and run-time libraries.

All software is distributed in source format. C may be built to run under RSTS/E V7.2/V8.0, RSX-11M V4.0, RT-11 V4.0, VMS V3.1-V3.2 (compatibility mode), or TSX-PLUS V2.2/V3.0. C may be modified to run on earlier versions of those operating systems and should run on subsequent versions without extensive modification. DECUS number 11-SP-18.

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Restrictions: DECUS C supports a subset of the current version of C. Minor problems may be encountered in converting from other dialects of C.

Note: Full support is provided for EIS, FPU, improved code generation, and improved utility programs. A few modules are release-specific and may require modification for earlier or later releases. Primarily on VMS compatibility mode, all documentation is included on the tape but can be ordered in hard copy.

A version of this product is available for the PDP-11 computer.

Price: \$5 - \$225

Contact: DECUS (see Introduction)

C Native and Cross-Compilers

Operating System: VMS

Keywords: • Compilers • Cross-compilers

• Pre- and postprocessors • Programming tools

The C Native Compiler operates in three sequential passes, producing two intermediate files, each comparable in size to the source code being compiled. The installation kit consists of the C Native Compiler, which has the preprocessor (pp), the parser (p1), and the code generator (p2). The C Library, containing the Portable Library (clib), the System Interface Library for the HOST operating systems, and the Machine Interface Library for the HOST machine, are also included in the installation kit.

The C Cross-Compiler includes a C Native Compiler, plus an additional code generator (p2), an assembler (as), and object libraries for the cross-supported target machine. All packages also include the Whitesmiths portable linker and librarian, plus other programming support utilities.

A version of this product is available for the PDP-11 computer.

Price: \$500 - \$2200

Contact: Christina B. Hanley
(617) 369-8499

WHITESMITHS, LTD.

97 Lowell Road

Millbrook Tarry

Concord, MA 01742

C Test Suite

Operating System: Independent, ULTRIX-32, UNITY, VMS

Keywords: • Compilers • Debugging

The C Test Suite is a collection of thousands of programs (conforming to draft ANSI C Standard) that exhaustively test C constructs. The programs are arranged in modules so that programmers can test one area in a few minutes or an entire compiler in a few weeks.

C Test Suite checks preprocessor and lexical conventions; default typing rules; constants in various bases and floating-point literals; string literals; goto, while, do, for, switch, continue, if, and ternary ?; functions for parameters, types, recursion, and autovariables; enumerated types and void types; arrays and array initialization; structs, unions, and bit fields; operator precedence; initialization of variables; pointers to ints, longs, chars, and shorts, pointer arithmetic; autoincrement/autodecrement; shifts/casting; and arithmetic expressions, including conversion rules, function calls, intermixed pointers structs and variables, storage classes, and op = forms of arithmetic.

A version of this product is available for the PDP-11 computer.

Price: \$20,000

Contact: Sales Department
(416) 922-1937

HUMAN COMPUTING RESOURCES CORP.

10 St. Mary Street, Fourth Floor
Toronto, Ontario M4Y 1P9
Canada

C68

Operating System: ULTRIX-32, UNIX* (Berkeley), VMS

Keywords: • Assemblers • Compilers • Cross-compilers
• Microprocessor development

This C compiler generates compact, efficient, executable object code for MC68000 microprocessors. C68 consists of a macropreprocessor, compiler, relocatable assembler, linking loader, support library, and utilities. Also included is a symbolic debugger that does MC68000 instruction disassembly, referencing compiler and/or assembler symbolic names. The debugger also provides breakpointing, instruction tracing, and inspect/change facilities. Utility programs are included for down-loading executable programs and symbol tables to the 68000 development board via a serial channel. The C68 system generates programs that execute stand alone or under operating system control on the 68000. Versions of C68 are available for the LSI-11 and PDP-11 with UNIX*, VAX-11 with UNIX* or VMS, Tektronix 8560 with UNIX*, and MC68000 with VERSAdos, UNIX*, or REGULUS.™

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$1495

Contact: Bill Allen

(619) 578-0860

ALCYON CORP.

8716 Production Avenue
San Diego, CA 92121

CDL2 Compiler

Operating System: ULTRIX-32, VMS

Keywords: • Compilers • Cross-compilers
• Microprocessor development • Programming tools

Distribution media: 9-track 1600 bpi magnetic tape, TU58 DECtape II cartridge.

This high-level programming language offers a special means of structuring and verbalization. CDL2 is an open-ended language that allows flexible use of the hardware. Selected parts of a program can be formulated in a target language — usually the assembler of the target computer — and can be integrated by a macro mechanism. CDL2 thus combines the advantages of high-level programming with the execution efficiency of a machine-oriented language.

CDL2 programs consist of separately compilable modules linked through export-import interfaces. Strictly specified interfaces serve as a media for communication; implementation details remain hidden. Thus, programs are clearly organized and easier to maintain.

Stepwise refinement is consistently applied. Each procedure contains calls of other procedures that represent the next level of refinement. The lowest level is macros in the target language. Procedures and macros are short and clearly organized. The compiler combines the macros into larger units by expanding them at their calls or by calling them as procedures.

CDL2 forces the programmer to specify intentions precisely. That promotes the transparency of the software and allows a thorough plausibility check on the flow of control and data, revealing errors before the test phase begins. A source-oriented debug system helps to detect errors in the design and the algorithmic formulation.

Programs can be adapted on the macro level for specific hardware or operating system functions. Tasks that are reserved for assembler programming can be formulated in a high-level language.

To implement the language simply and efficiently on different computers, a standardized interface for code generators has been created. Free combination of each compiler with each code generator permits flexible cross-compilation techniques. User-written code generators can be integrated.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Hartmut Feuerhahn
+ 49-30-3419008

EPSILON

Otto-Suhr-Allee 22

D-1000 Berlin 10

West Germany

CE (Concurrent Euclid)**Operating System:** UNIX* (Berkeley), VMS**Keywords:** • Cross-compilers • Microprocessor development

Concurrent Euclid, a programming language designed for implementing software, is efficient, reliable, and portable. CE is particularly suited for implementing operating systems, compilers, and specialized microprocessor applications. It can serve as a basis for producing verifiable system software.

CE has been designed to allow its compiler to be small, fast, and portable. Such a compiler exists, with replaceable high-quality code generators for various machine architectures.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: \$300 – \$3000**Contact:** E. Ann Struthers

(416) 978-6985

COMPUTER SYSTEMS RESEARCH INSTITUTE

University of Toronto

10 King's College Road

Toronto, Ontario M5S 1A4

Canada

COBOL**Operating System:** MicroVMS, VMS**Keywords:** • Compilers • Programming tools

Distribution media: 9-track 1600 bpi magnetic tape, RX01, RX50, TK50, TU58 DECTape II cartridge.

VAX COBOL, a high-level language for business data processing, runs under the VAX/VMS and MicroVMS operating systems, taking full advantage of the system facilities and the VAX Information Architecture. This version is based on the 1974 ANSI COBOL Standard X3.23-1974 and includes features planned for the next COBOL standard.

VAX COBOL shares some common syntax with COBOL-81/RSTS/E and COBOL-81/RSX and includes a COBOL-81 subset flagger. This version also has DIGITAL extensions to COBOL, including screen handling at the source language level.

The VAX COBOL product contains a COBOL compiler, the REFORMAT Utility, and the PDP-11 COBOL Version 4.4 to Translator Utility.

Refer to SPD #25.04.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$797 – \$11,950**Contact:** Consult your local DIGITAL sales office (see Introduction).

COBOL VAX to MC68000 Cross-Compiler

Operating System: ULTRIX-32

Keywords: • Cross-compilers • Microprocessor development
• Source code control

This cross-compiler permits, on the VAX line of equipment, COBOL compilations that produce native assembly language for the MC68000. The product is implemented to ANSI Standard (X3.23-1974) for full FIPS COBOL. The Nucleus and 10 functional modules (Table Handling, Sequential I/O, Relative I/O, Indexed I/O, Sort/Merge, Segmentation, Library, Debug, Interprogram Communication, and Communication) conform to full Level 2 Standard.

Deliverables include all the necessary reference and internal manuals, source programs, personnel training, and distribution rights. The compiler is not available directly to end users, but inquiries from equipment manufacturers, OEMs, and distributors are invited. With modification, the compiler can be conveniently retargeted to other micros.

Price: Available upon request

Contact: George Finckenor
(212) 696-3600

ADVANCED COMPUTER TECHNIQUES
16 East 32nd Street
New York, NY 10016

Common Pilot

Operating System: VMS

Keywords: • Computer-aided instruction • Education
• Interpreters

Memory required: 96KB. Distribution medium: magnetic tape.

Common Pilot is a language interpreter for delivery of computer-assisted instruction lessons. Lessons are created with any available text editor and are executed directly from text file format. The language is compatible with the MICROPI Common Pilot available on a variety of microprocessors, minicomputers, and mainframes. The language includes features for creation of highly interactive student-lesson dialog, answer evaluation, pattern matching, text presentation, computation, string manipulation, and branching. Pilot programs developed on one system can be run with little or no change on any other system that supports Common Pilot. The interpreter is written in Pascal to facilitate future enhancements.

This program is distributed as an executable binary file only. The source is not available from the DECUS Library.

Documentation is on magnetic media. DECUS number VAX-32.

Note: Recompiled to run under VAX/VMS V3.0.

Price: \$5 – \$225

Contact: DECUS (see Introduction)

Compact Level II COBOL

Operating System: VMS

Keywords: • Compilers • Microprocessor development
• Programming tools • Source code control

Compact Level II COBOL is a mainframe-level compiler for ANSI '74 COBOL programs. It enables microcomputers to compile and run programs written in full High Level GSA Standard COBOL, based on the ANSI '74 COBOL Standard, with minimal source code modification. Thus, users can maintain and execute existing COBOL programs on microcomputers.

A version of this product is available for the PDP-11 computer.

Price: \$1600

Contact: Andy Pope or Stacy Beard, Technical/Customer Support
(415) 856-4161

MICRO FOCUS INC.

1860 Embarcadero Road #235

Palo Alto, CA 94303

CORAL 66

Operating System: VMS

Keywords: • Compilers • Process control • Programming tools
• Real time

Distribution media: RX01, TU58 DECtape II disk cartridge.

This high-level block-structured programming language is the standard, general-purpose language prescribed by the British government for real-time and process control applications. CORAL 66 is defined in BS 5905, British standard specification for computer programming language CORAL 66. The VAX CORAL 66 compiler operates under VAX/VMS and is implemented in accordance with the British standard.

The language is designed to replace assembly-level programming in modern industrial and commercial applications. CORAL 66 is used for long-life products requiring ease of maintenance and flexibility.

Refer to SPD #25.37.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$7500

Contact: Consult your local DIGITAL sales office (see Introduction).

CORAL 66/VAX to RSX Cross-Compiler

Operating System: VMS

Keywords: • Cross-compilers • Language enhancers
• Process control • Real time

Distribution media: RX01, TU58 DECTape II cartridge.

CORAL 66, a high-level block-structured programming language, is the standard general-purpose language prescribed by the British government for real-time and process-control applications. CORAL 66 is defined in BS 5905, British standard specification for computer programming language CORAL 66. The language, designed to replace assembly-level programming in modern industrial and commercial applications, is used for long-life products requiring ease of maintenance and flexibility.

The CORAL 66/VAX to RSX Cross-Compiler operates under the VAX/VMS operating system. Code generated by the cross-compiler and linked under VAX/VMS with the appropriate OTS supplied with this product may be run under VAX/VMS in compatibility mode or on any PDP-11 running RSX-11M V4.0 or RSX-11M-PLUS V2.0. Code generated by the cross-compiler may also be transferred to any PDP-11 running RSX-11M V4.0 or RSX-11M-PLUS V2.0 and linked with the PDP-11 V4.0 OTS to run on that PDP-11.

FORTRAN and MACRO-11 subroutines may be incorporated in CORAL tasks, provided that certain coding conventions are followed.

Refer to SPD #25.69.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$4050

Contact: Consult your local DIGITAL sales office (see Introduction).

DBL (Data Business Language)

Operating System: VMS

Keywords: • Compilers • Debugging • Programming tools

The DBL programming language is a superset of DIBOL-11 and has many extensions that simplify program development and maintenance. The many DISC-developed enhancements increase the effectiveness of the language and provide modern, structured-language facilities. Use of DBL leads to increased programmer productivity and reduced program development and maintenance costs.

DBL maintains upward compatibility through all versions of DBL and DIBOL, including DIBOL-83. Application programs can, therefore, continue to be used, even as hardware and operating systems are changed.

DBL V4.0 allows integration with many operating systems and hardware. This version provides a software virtual memory environment, eliminating program overlaying; multikey ISAM support through extended DBL statements; a fixed-point decimal data type; multidimensional arrays; terminal-independent screen functions for cursor positioning and screen attribute manipulation; a FIND statement for setting the file pointer to a random record in a file; SORT and MERGE statements for efficient file manipulation; SCAN and REPLACE statements for doing string search and replacement operations; compile-time constants; up to 15-character identifiers, which may include the underscore character; the ability to put many subroutines into a single source file, either by themselves or following a mainline; the ability to create "bound" applications made up of separate programs (eliminating program startup and shutdown during chaining and allowing all programs to access only one set of utility subroutines); and the ability to create executable subroutine libraries.

A powerful symbolic debugger allows debugging without linking in special code. That feature permits intact debugging of production code while eliminating the need for, and problems associated with, special test code. DBL's debugging facility is easy to use, yet contains sophisticated features.

A version of this product is available for the PDP-11 computer.

Price: \$449 - \$3549

Contact: Stacey Hodge
(916) 363-7385

DISC

3336 Bradshaw Road, Suite 340
Sacramento, CA 95827

DEC/Shell

Operating System: MicroVMS, VMS

Keywords: • Development tools • Interpreters
• Language enhancers • VNX

Distribution media: 9-track 1600 bpi magnetic tape, RX01, RX50, TU58 DECTape II cartridge.

The VAX DEC/Shell command interpreter and programming language provides an interface to VMS similar to that on a UNIX* Version 7 system. DEC/Shell consists of a command line interface and the shell script language. When combined with common UNIX* utilities, those two components provide a program development environment familiar to users experienced with the UNIX* Version 7 system.

VAX DEC/Shell includes environment variables, pipes, user-definable search paths for command execution, UNIX* file name syntax, input and output redirection to and from files, commands and utilities similar to those on a UNIX* system, string substitution, structured

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constructs, modification of a command's environment, and a Shell run-time library. In addition, VAX/DEC Shell provides access to DCL commands and VMS programs.

* UNIX is a trademark of AT&T Bell Laboratories.

Refer to SPD #26.69.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$475 - \$7125

Contact: Consult your local DIGITAL sales office (see Introduction).

Des BASIC (BASIC Cross-Compiler)

Operating System: ULTRIX-32, VMS

Keywords: • Cross-compilers • Microprocessor development

This cross-compiler system operates on a VAX or a PDP-11 minicomputer while generating code for the 68000, 8086/88, Z80, and Z8000. The Des BASIC is a complete BASIC language programming system that includes a BASIC front end, an optimizing back end, an assembler, a linker, and comprehensive run-time libraries. The Des BASIC is compatible with the IBM-PC BASIC and MBASIC from MicroSoft. Support for single- and double-precision floating-point arithmetic is included.

Des BASIC is one of the highest-performance compilers in the marketplace. Destek also offers a run-time library for OS/RT, Destek's real-time, multitasking operating system kernel. Compiler front ends for C and Pascal are also available.

A version of this product is available for the PDP-11 computer.

Price: \$6000

Contact: Dennis Rieger
(408) 737-7211

THE DESTEK GROUP
830 East Evelyn Avenue
Sunnyvale, CA 94086

Des C (C Cross-Compiler)

Operating System: ULTRIX-32, VMS

Keywords: • Cross-compilers • Microprocessor development

This cross-compiler system operates on a VAX or a PDP-11 minicomputer while generating code for the 68000, 8086/88, Z80, and Z8000. The Des C is a complete C language programming system that includes a C front end, an optimizing back end, an assembler, a linker, and comprehensive run-time libraries. Des C includes the full Kernighan and Ritchie capability (UNIX* V.7) with single- and double-precision floating-point arithmetic included.

Des C is one of the highest-performance compilers in the marketplace. Destek also offers a UNIX*-like run-time library for OS/RT, Destek's real-time, multitasking operating system kernel. Compiler front ends for BASIC and Pascal are also available.

A version of this product is available for the PDP-11 computer.

Price: \$6000

Contact: Dennis Rieger
(408) 737-7211

THE DESTEK GROUP
830 East Evelyn Avenue
Sunnyvale, CA 94086

Des Pascal (Pascal Cross-Compiler)

Operating System: ULTRIX-32, VMS

Keywords: • Cross-compilers • Microprocessor development

This cross-compiler system operates on a VAX or a PDP-11 minicomputer while generating code for the 68000, 8086/88, Z80, and Z8000. The Des Pascal is a complete Pascal language programming system that includes a Pascal front end, an optimizing back end, an assembler, a linker, and comprehensive run-time libraries. The Pascal is based on the ISO standards and contains numerous extensions for business and industrial use. Support for single- and double-precision floating-point arithmetic is included.

Des Pascal is one of the highest-performance compilers in the marketplace. Destek also offers a run-time library for OS/RT, Destek's real-time, multitasking operating system kernel. Compiler front ends for C and BASIC are also available.

A version of this product is available for the PDP-11 computer.

Price: \$6000

Contact: Dennis Rieger
(408) 737-7211

THE DESTEK GROUP
830 East Evelyn Avenue
Sunnyvale, CA 94086

DIBOL

Operating System: MicroVMS, VMS

Keywords: • Compilers • Data dictionary • Debugging
• Programming tools

Distribution media: 9-track 1600 bpi magnetic tape, RX01, RX50, TU58 DECTape II cartridge.

VAX DIBOL, a high-level procedural language for interactive business data processing, runs under the VAX/VMS and MicroVMS operating systems, taking full advantage of the system facilities. VAX DIBOL is based on the DIBOL Standards Organization's DIBOL-83 definition of

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the language; is highly compatible with DIBOL-83 implementations on other operating systems, including RSTS/E, RSX-11M-PLUS, Micro/RX, CTS-300, Professional CTS-300, and P/OS; and also provides VAX-specific extensions and an expansion path for applications requiring the power of VAX/VMS or MicroVMS, while retaining the capabilities and advantages of DIBOL-83.

DIBOL provides efficient terminal handling and efficient access to the VAX Record Management Services (RMS). DIBOL-83 supports a set of language statements commonly referred to as structured constructs. Those statements are designed to complement and facilitate desirable programming practices.

The DIBOL compiler reads a source program and produces a shareable object module. The compiler can produce a source listing with embedded diagnostics and a cross-reference listing. Object modules produced by the compiler conform to the VAX-11 procedure calling standard and may be linked with native-mode object modules produced by other VAX language processors.

The VAX DIBOL product includes a compiler, a run-time library, external subroutine libraries, the DIBOL Debugging Technique, a message manager for communicating between programs, a program to monitor the activities of the message manager, and programs that provide access to the VAX SORT, using command files that are compatible with other DIBOL products.

Refer to SPD #25.49.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$415 - \$4150

Contact: Consult your local DIGITAL sales office (see Introduction).

DSM

Operating System: MicroVMS, VMS

Keywords: • Data base management • Interpreters
• Language enhancers • Pre- and postprocessors

Distribution media: 9-track 1600 bpi magnetic tape, TU58 DECTape II cartridge, RX01, RX50.

This multiuser data management system includes DIGITAL Standard MUMPS (DSM). This high-level interpretive language is a superset of the American National Standard MUMPS specification X11.1-1984. The shareable, reentrant interpreter operates under the VAX/VMS and MicroVMS operating systems to take advantage of the packed decimal and character string instruction set, the virtual memory, and the I/O capabilities of the operating system.

The DSM language is directed primarily toward the processing of variable-length string data, making interactive data base systems easier to implement and maintain.

Refer to SPD #25.08.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$9000 – \$13,500

Contact: Consult your local DIGITAL sales office (see Introduction).

DSM (Decision Sheet Modeling)

Operating System: VMS

Keywords: • Decision support • Financial analysis
• Financial planning • Spreadsheets

Decision Sheet Modeling is a horizontal market product for non-data processing people whose daily work habits require reference to a worksheet. DSM is the only modeling language that provides a high-level language and an electronic spreadsheet first entry level that is compatible with the main modeling system.

A version of this product is available for the PDP-11 computer.

Price: \$1000 – \$42,000

Contact: Phelim Dolan

(604) 732-9141 or 734-8822

CANADIAN EUROPEAN SYSTEMS (SYDNEY
DEVELOPMENT CORP.)

P.O. Box 2884

Vancouver, BC V6B 3X4

Canada

DUAL (Dynamic Universal Assembly Language)

Operating System: VMS

Keywords: • Assemblers

This machine-independent assembler and link editor, compatible with PSS's JOVIAL compiler and the RAID system, is available on 22 host machines, including the VAX-11, DECsystem-10, DECSYSTEM-20, IBM 370 (or equivalent), CDC 6000, Univac 1100, Interdata 7/32, Honeywell 6000, and Xerox Sigma series. DUAL has been targeted to more than 130 computers, including the Motorola 6800, 6809, and 68000; Intel 8080; PDP-11; NOVA; HP2100; MIL-STD-1750A; and Zilog Z8001/Z8002.

The DUAL assembler's features include extensive macro facilities, meta-assembler features for simplified (user-retargeting) cross-assembler generation, conditional assembly directives, a variety of constant formats (integer, multiple-precision fixed point, multiple-precision floating point, character, enumeration, based, and so on), multiple-location counters, minimal user restrictions, and source-conversion facilities. The DUAL link editor's features include complete user-controlled allocation, absolute assembly listing of the entire link edit, overlays and object library support, expanded memory support, checksum and memory-protection features, and an operating system interface.

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Price: \$35,000

Contact: Joel Fleiss

(213) 394-5233

PROPRIETARY SOFTWARE SYSTEMS, INC.

429 Santa Monica Boulevard, Suite 430

Santa Monica, CA 90401

DYNAMO III/F +

Operating System: VMS

Keywords: • Graphics • Mathematics • Simulation

DYNAMO III/F+ is a continuous simulation language for the construction of large models in business, science, and education. DYNAMO III/F+ offers comparative plots, user-defined functions (macros), as well as built-in functions, arrays, and thorough error checking. The language allows users to order equations as they choose, and nontechnical users can understand models at the equation level. DYNAMO III/F+ reruns models without recompiling after parameter and output changes and also facilitates the exploration and comparison of what-if scenarios.

Price: \$5000 - \$10,000

Contact: Jack Pugh

(617) 864-8880

PUGH-ROBERTS ASSOCIATES, INC.

5 Lee Street

Cambridge, MA 02139

FIXIT: BASIC Translator

Operating System: VMS

Keywords: • Application development • Programming tools
• Translators

Memory required: 64KB.

This program assists in converting either BASIC-PLUS-2 Version 1.6 programs or programs written in one of the MicroBASIC implementations into VAX BASIC Version 2 program format. The program can be compiled and run under VAX-11 BASIC or under PDP-11 BASIC-PLUS-2.

The program asks for input and output file names, the type of BASIC, and some formatting information. The program incorporates prettyprinting-indenting to show structure; inserts END IF statements to allow for removal of line numbers; moves MAP, DIM, and COMMON statements to low-numbered statement numbers; and permits blank insertion for programs with blanks compressed out and removal of backslash characters and unnecessary ampersand characters.

Numerous special-case transformations are available to assist in converting programs written in one of the MicroBASIC dialects. DECUS number 11-686.

Restrictions: This utility does not handle all dependencies of the MicroBASIC systems. Rather, it assists by handling mechanical changes. The program is easy to modify, especially for handling variants of the MicroBASIC implementations.

A version of this product is available for the PDP-11 computer.

Price: \$5 - \$225

Contact: DECUS (see Introduction)

FLECS (FORTRAN Language with Extended Control Structures)

Operating System: VMS

Keywords: • Development tools • Language enhancers
• Pre- and postprocessors • Programming tools

FLECS is both an extension to the FORTRAN language and a transportable preprocessor that implements that extension. The FLECS language comprises nine control structures not found in standard FORTRAN; in all other ways, FLECS is identical to FORTRAN. The preprocessor translates FLECS control structures into equivalent FORTRAN and produces a listing that displays the logical structure of the program.

FLECS is easy to learn and use. FLECS is currently being used successfully by both beginning and advanced programming students and by professional programmers.

The preprocessor consists of a 2000-statement main program and 17 support subroutines. Tested sets of assembly language subroutines are available for certain machines and systems. Such versions run from 12 to 20 times faster than their FORTRAN equivalents.

FLECS is distributed on a source tape that includes versions of the preprocessor in both FLECS and FORTRAN, with subroutines in assembly language, if available.

A version of this product is available for the PDP-11 computer.

Price: \$325

Contact: FLECS Distribution Clerk
(503) 686-4394

COMPUTING CENTER

University of Oregon

Eugene, OR 97403

FOCAL

Operating System: VMS

Keywords: • Interpreters • Source code control

Memory required: 20 pages working set.

This fully functional implementation of FOCAL may be valuable as an example for other people learning VAX. FOCAL has facilities for handling program and data files, written in VAX native mode, makes good use of the native instruction set, and is reasonably fast for an interpreter. FOCAL has almost unlimited capacity for program and data, since virtual memory space dynamically expands as required.

A help file documents special features or deficiencies of this implementation. Modify and Erase commands are not included. Since DIGITAL has supported FOCAL on at least the PDP-5, PDP-8, PDP-11, and PDP-15, no general documentation on the FOCAL language is considered necessary.

The installation procedure is identical to that for any DIGITAL optional software on VAX/VMS.

No documentation is available. DECUS number VAX-1.

Price: \$5 - \$225

Contact: DECUS (see Introduction)

FORTRAN

Operating System: MicroVMS, VMS

Keywords: • Compilers • Diagnostics • Programming tools

Distribution media: 9-track 1600 bpi magnetic tape, RX01, RX50, TU58 DECTape II cartridge.

VAX FORTRAN is an implementation of full-language FORTRAN-77, conforming to American National Standard FORTRAN, ANSI X3.9-1978. VAX FORTRAN includes optional support for programs conforming to the previous standard, ANSI X3.9-1966. VAX FORTRAN meets the Federal Information Processing Standard Publication (FIPS-69) requirements for a flagger. The flagger optionally produces diagnostic messages for syntax and/or source form elements that do not conform to the Full-Level ANSI FORTRAN X3.9-1978 Standard. The shareable, reentrant compiler operates under the VAX/VMS and MicroVMS operating systems and takes advantage of the VAX floating-point and character string instruction set and the VAX/VMS virtual-memory system.

Refer to SPD #25.16.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$517 - \$7755

Contact: Consult your local DIGITAL sales office (see Introduction).

FORTRAN-77 VAX to NS16000 Cross-Compiler

Operating System: VMS

Keywords: • Cross-compilers • Microprocessor development
• Source code control

This cross-compiler permits, on the VAX line of equipment, FORTRAN compilations that produce native assembly language for the NS16000. The compiler is implemented to ANSI Standard (X3.9-1978) for full FORTRAN-77 and includes MIL-STD 1753 extensions as an optional feature.

Deliverables include all the necessary reference and internal manuals, source programs, personnel training, and distribution rights. The compiler is not available directly to end users, but inquiries from equipment manufacturers, OEMs, and distributors are invited. With modification, the compiler can be conveniently retargeted to other micros.

Price: Available upon request

Contact: George Finckenor
(212) 696-3600

ADVANCED COMPUTER TECHNIQUES
16 E. 32nd Street
New York, NY 10016

FORTRAN-77/VAX to RSX

Operating System: VMS

Keywords: • Communications • Compilers • Data conversion
• Networking

Distribution media: RX01, TU58 DECtape II cartridge.

PDP-11 FORTRAN-77/VAX to RSX is a compatibility-mode compiler that runs on VAX/VMS under the AME. Source programs can be compiled and task-built under the AME and then transported to an RSX system for execution.

PDP-11 FORTRAN-77/VAX to RSX is an extended implementation of the ANSI subset FORTRAN-77 Standard (X3.9-1978) that runs on the VAX/VMS operating system. The compiler contains all the features of the ANSI FORTRAN-77 subset, many of the full-set language features, and extensions that are not included in the ANSI FORTRAN-77 Standard. Switch-selectable support is provided for programs based on the previous ANSI FORTRAN Standard (X3.9-1966).

PDP-11 FORTRAN-77/VAX to RSX meets the Federal Information Processing Standard Publication requirement for a flagger. The flagger optionally produces diagnostic messages for syntax and/or source form elements that do not conform to the full-level ANSI FORTRAN (X3.9-1978) Standard.

PDP-11 FORTRAN-77/VAX to RSX programs can be optionally executed under control of PDP-11 FORTRAN-77 DEBUG VAX to RSX (SPD #26.75.xx), which aids in the location of programming errors in successfully compiled programs that behave abnormally when executed.

Refer to SPD #26.16.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$3000

Contact: Consult your local DIGITAL sales office (see Introduction).

FORTRAN IV/VAX to RSX (PDP-11 Cross-Compiler)

Operating System: VMS

Keywords: • Compilers • Cross-compilers
• Language enhancers • Programming tools

Distribution media: RX01, TU58 DECTape II cartridge.

FORTRAN IV is an extended FORTRAN implementation based on the former American National Standard (ANSI) FORTRAN (X3.9-1966). The compiler operates under the VAX-11 RSX product on VAX/VMS systems. Compiled programs can be transported to supported RSX-11M/11M-PLUS, RSX-11S, and IAS target systems for task building. In addition, programs that do not use virtual-array support can be task built under VAX-11 RSX. The resulting task image may be executed on RSX-11M/M-PLUS or RSX-11S systems or on the VAX/VMS system under VAX-11 RSX. Programs using virtual arrays must be task built and executed on the target PDP-11 configured with appropriate memory-management hardware and operating system support.

Refer to SPD #25.17.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$700

Contact: Consult your local DIGITAL sales office (see Introduction).

FORTRIX-C (FORTRAN to C Translator)

Operating System: ULTRIX-32, ULTRIX-32m, VMS

Keywords: • Compilers • Translators

Memory required: 500K. Distribution media: magnetic tape or alternative.

FORTRIX-C, written in C, translates FORTRAN code to C code so that input data files remain compatible with the new C program, and the FORTRAN comment lines are translated in place so that internal documentation is retained. The generated C code is fully structured and easily readable and therefore easily maintained and updated. The resulting C program will typically run 15% to 30% faster than the original FORTRAN.

FORTRIX-C is supplied complete and runs as is. Special programs needed to account for different UNIX* environments or for use by more experienced programmers are supplied. Those programs are documented for each hardware configuration but generally include integer character string converters, space allocators, string parsers, and other string manipulators not available in the standard C libraries.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$2750 - \$4700

Contact: Henry Weiss

(212) 687-6255 or Telex: 509210

RAPITECH SYSTEMS, INC.

565 Fifth Avenue

New York, NY 10017

Franz Lisp

Operating System: MicroVMS, ULTRIX-32, ULTRIX-32m, VMS

Keywords: • Artificial intelligence • Compilers
• Development tools • Interpreters

This programming language was developed for research work in symbolic manipulation, expert systems, and other artificial intelligence projects. The language provides a Franz Lisp interpreter, a compiler, a complete Lisp run-time library, FORTRAN and C run-time Lisp interfaces (allowing FORTRAN or C programs to be executed from within Lisp programs), and graphics support. System tools include OPS-5, flavors, FRL, PEARL, MACSYMA, CGOL, GLISP, debugging and documentation systems, interfaces to relational data base systems, graphics display systems, and extensive libraries for numerical and combinatorial mathematics, statistics, and optimization. Systems written in other dialects of Lisp can be merged and run under Franz Lisp by the use of compiler declarations and environment libraries.

The *Franz Lisp Reference Manual* has been improved and extended and is now augmented by the textbook *Lispcraft* by Professor Robert Wilensky of the University of California (W. W. Norton, 1984).

Complete support and service are provided.

Price: Available upon request

Contact: F. Kunze

(415) 540-1224

FRANZ INC.

2920 Domingo Avenue, Suite 203

Berkeley, CA 94705

GDADL (Greatest Damn Ada-Based Design Language)

Operating System: MicroVMS, ULTRIX-32, VMS

Keywords: • Development tools • Engineering
• Source code control

This Program Design Language (PDL) and its associated software tools are based on Ada, the Department of Defense's standard language. GDADL allows the designer to describe the concept of the design, using Ada language features. The user can express or omit

details. GDADL uses a comment-compatible structured English pseudocode to express the design and helps reviewers and designers understand the design before it is committed to code.

The design and the implementation language source code can be kept in the same file and processed without error by both the source language compiler and the GDADL processor. Thus, the original design can be maintained and enhanced.

The GDADL processor analyzes the structured English pseudocode and any Ada declarations to produce reports that reflect the design during development. The processor provides information about the design, such as the control structures, module invocations, and abnormal exits.

Other design reports include an invocation tree showing the structure of the program, as well as object and type cross-reference reports showing where the objects and types are declared and used and where designers declared but never used entities. The TBD reference report shows where the designer left things to be determined. Generic instantiations are shown in a separate report. A data dictionary shows Ada entities and their user-supplied, free-form definitions.

The GDADL processor can create up to 10 customized cross-reference reports.

A demonstration version of the processor is available for \$100.

A version of this product is available for the PDP-11 computer.

Price: \$3000 - \$7500

Contact: Dr. Thomas S. Radi
(714) 625-6147

COMPUTER SYSTEMS DESIGN
3627 Padua Avenue
Claremont, CA 91711

HCR/Pascal

Operating System: ULTRIX-32, UNITY, VMS

Keywords: • Assemblers • Compilers • Pre- and postprocessors

HCR/Pascal conforms to the ISO (1981) draft standard and the ANSI standard for Pascal processors. HCR/Pascal lets you use UNIX* system calls, subroutines, and libraries. This UNIX*-compatible implementation of the complete UCSD string package features efficient compiled code and a macro preprocessor with all the properties of the C preprocessor.

A version of this product is available for the PDP-11 computer.

Price: \$1000 +

Contact: Sales Department
(416) 922-1937

HUMAN COMPUTING RESOURCES CORP.

10 St. Mary Street

Toronto, Ontario M4Y 1P9

Canada

How to Lock Out Certain Users from Using FORTRAN Compiler

Operating System: VMS

Keywords: • Cross-compilers • Operations • Security

Distribution medium: magnetic tape.

This program allows the system administrator to regulate users of the FORTRAN compiler. With a few minor changes, this system can be expanded to other compilers, editors, and commands. DECUS number VAX-74.

Price: \$5 - \$225

Contact: DECUS (see Introduction)

INTOUCH

Operating System: MicroVMS, VMS

Keywords: • Application development • Data base management
• Data conversion • Query facilities

Distribution medium: 9-track magnetic tape.

This application development tool for IBM PC/XT and VAX computers has the power of a fourth-generation language without the expense of those languages. INTOUCH includes a powerful, easy-to-use language for novices and sophisticated language extensions for technical programmers. The tool offers an advanced development environment with fast response and the ability to interrupt program execution, change code, and then continue execution. INTOUCH's high-level debug facilities include tracing program execution and recording execution times.

Price: \$5000 - \$40,000

Contact: Daniel Esbensen
(619) 743-0494

TOUCH TECHNOLOGIES INC.

609 S. Escondido Boulevard, #101

Escondido, CA 92026

JMI Portable C Library

Operating System: ULTRIX-32, UNIX* (System III, System V),
VMS

Keywords: • Development tools • File management

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This comprehensive portable library, written in C, contains routines equivalent to those found in both the standard C library (as described in *The C Programming Language*, by Kernighan and Ritchie and found in most UNIX* systems) and the Whitesmiths, Ltd., Portable C Runtime Library. The JMI Portable C Library is designed for implementing ROMable systems, sharing functions among processes, and restarting memory-resident systems without reloading. Most standard libraries lack those features, which are vital for designing embedded systems.

Also included in the Portable C Library are routines to allocate, and later free, storage area on the heap. Those functions include calloc, malloc, and free for Kernighan and Ritchie compatibility, and alloc, nalloc, free, and frelst for Whitesmiths compatibility. The memory-allocation routines assume that the underlying environment or operating system provides a function called sbreak, which expands the heap.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$5000

Contact: Deborah A. Fullam

(215) 628-0846

JMI SOFTWARE CONSULTANTS

P.O. Box 481

Spring House, PA 19477

JOVIAL 1589B

Operating System: VMS

Keywords: • Compilers • Cross-compilers
• Data base management

The high-performance JOVIAL J73 compilers are fully compatible with MIL-STD-1589B and run on VAX, DIGITAL 10/20 systems, and an IBM 370 or equivalent host system. Target computers include the MIL-STD-1750A, Zilog Z8002, VAX, Intel 8086, IBM 370, and the CP-2EX.

JOVIAL, the official Air Force-approved language for embedded computer system applications, is a block-structured language supporting structured programming concepts. JOVIAL includes strong typing, conditional compilation, large data base support (Compool), parameter/macro compiler time facilities (DEFINE), and extensive code optimization.

Price: \$115,000

Contact: Joel Fleiss

(213) 394-5233

PROPRIETARY SOFTWARE SYSTEMS, INC.

429 Santa Monica Boulevard, Suite 430

Santa Monica, CA 90401

JOVIAL J73 Support Software Systems

Operating System: VMS

Keywords: • Assemblers • Compilers • Cross-compilers

This system consists of a JOVIAL J73 compiler, a macro assembler, and a linker for two target computers — the ZILOG Z8002 and the MIL-STD 1750A. Written in FORTRAN, the system is transportable and can be conveniently rehosted and retargeted to other processors. The system comes with complete documentation and ongoing support.

Price: Available upon request

Contact: George Finckenor
(212) 696-3600

ADVANCED COMPUTER TECHNIQUES
16 East 32nd Street
New York, NY 10016

Lattice C Cross-Compiler

Operating System: ULTRIX-32, UNIX* (Berkeley), VMS

Keywords: • Cross-compilers • Microprocessor development

This compiler for iAPX 86 microcomputer systems accepts source code files written in the C programming language and produces relocatable machine code in Intel's 8086 object module format. The machine code can be combined by link editors, such as Microsoft's LINK or Phoenix Software Associates' PLINK86, to form larger programs. The Lattice C library defines a comprehensive set of useful subroutines and implements most of the UNIX* I/O functions under MS-DOS. The library also contains MS-DOS versions of setjmp(), longjmp(), and fork/exec(). Lattice C is an ideal program development system, and no run-time license is needed to sell software products that are developed using this compiler.

The cross-compiler supports full IEEE representation of float and double arithmetic data types. Four memory models of the iAPX 86 family are supported, and four corresponding run-time libraries are provided. The cross-compiler package includes an object module disassembler and a function extract utility. As an extra-cost option, cross-versions of the Phoenix overlay link editor and library manager are available from Lattice. This option allows complete load modules to be built on the host system.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: \$3350 - \$5000

Contact: Dorothy Gaden
(312) 858-7950
LATTICE, INC.
346 Taft Avenue
Glen Ellyn, IL 60137

LISP

Operating System: MicroVMS, VMS

Keywords: • Compilers • Programming tools

Distribution media: 9-track 1600 bpi magnetic tape, RA60, RK07, RL02, RX50.

VAX LISP is an implementation of Common LISP, a dialect of LISP (LISt Processing Language). With the exception of complex numbers and the INSPECT function, VAX LISP is a complete, interactive Common LISP environment. *Common LISP; The Language*, written by Guy Steele and published by Digital Press, Spring 1984, is the standard reference for the language specifications.

Common LISP features a fully interactive user interface, built-in dynamic storage management, built-in facilities for manipulating lists and symbolic names, and more. VAX LISP features integration with the VAX/VMS operating system, including the facility to call non-LISP routines conforming to the VMS calling standard, a fully integrated compiler, and an extensible text editor with multiple-window display capabilities. The editor style provides features appropriate to LISP programming, such as parenthesis balancing, line indentation, and selection and evaluation of LISP forms.

Refer to SPD #25.82.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$4800 – \$8000

Contact: Consult your local DIGITAL sales office (see Introduction).

Logitech Modula-2

Operating System: VMS

Keywords: • Compilers • Cross-compilers • Debugging

Memory required: 1MB. Distribution medium: 9-track 1600 bpi magnetic tape.

Modula-2 translates standard Modula-2 source to VAX native object code. Key features include a VAX/VMS symbolic debugger to debug Modula-2 programs; a full, standard library of modules; low-level software and hardware access; and a complete implementation of the Modula-2 language. Modula-2 programs are linked with the VAX/VMS linker.

Price: \$1500

Contact: Christopher Cale
(415) 365-9852

LOGITECH INC.

805 Veterans Boulevard
Redwood City, CA 94063

Logitech Modula-2/VX86**Operating System:** VMS**Keywords:** • Compilers • Cross-compilers • Debugging
• Down-line loading

Memory required: 1MB. Distribution medium: 9-track 1600 bpi magnetic tape.

This cross-compiler compiles standard Modula-2 source directly to high-speed 8086/8088 native machine code. Key features include a full, standard library of modules; a symbolic debugger; multilevel overlays; low-level software and hardware access; utilities for uploading and downloading; and a complete implementation of the Modula-2 language.

Price: \$4500**Contact:** Christopher Cale
(415) 365-9852LOGITECH INC.
805 Veterans Boulevard
Redwood City, CA 94063**MACRO-05 MC6805 Cross-Development Tools****Operating System:** VMS**Keywords:** • Assemblers • Development tools
• Microprocessor development • Programming tools

Distribution media: RL02, RX01, RX02, RX03, RX50.

The relocating cross-assembler (MACRO-05), multifunction linker (LINK-05), and object librarian (LIBRRN) provide a comprehensive cross-development facility for RAM- and ROM-based 6805 systems. MACRO-05 features MACRO-11 pseudoops, manufacturer/DIGITAL-style mnemonics, MACRO-11 macro capability, and full 6805 support. LINK-05 provides ROM/RAM segmentation based on .PSECT directives, with output in binary, Motorola, Intel, Tektronix, and other formats. LIBRRN provides a compact storage and retrieval capability for relocatable object modules.

The package is written in structured MACRO-11, with identical specifications across operating systems. Dynamic memory-expansion techniques are used when supported by the operating system. The RSX and VMS (AME) implementations offer a virtual symbol table for unlimited symbol table storage. The binary license fee includes renewable support. Documentation is included.

A version of this product is available for the PDP-11 computer.

Price: \$1000

Contact: Arthur Gaughan
(215) 699-9658

SKIPPACK SYSTEMS GROUP
P.O. Box 1595
North Wales, PA 19454

MACRO-09 MC6809 Cross-Development Tools

Operating System: VMS

Keywords: • Assemblers • Development tools
• Microprocessor development • Programming tools

Distribution media: RL02, RX01, RX02, RX03, RX50.

The relocating cross-assembler (MACRO-09), structured assembly language (SCAT-09), multifunction linker (LINK-09), and object librarian (LIBRRN) provide a comprehensive cross-development facility for RAM- and ROM-based 6809 systems. MACRO-09 features MACRO-11 pseudoops, manufacturer/Digital-style mnemonics, MACRO-11 macro capability, and MC6809 support. SCAT-09 provides IF..THEN..ELSE, REPEAT..UNTIL, WHILE..DO, CASE..ELSE, and logical and arithmetic constructs, with unary and binary operators. LINK-09 provides ROM/RAM segmentation based on .PSECT directives, with output in binary, Motorola, Intel, Tektronix, and other formats. LIBRRN provides a compact storage and retrieval capability for relocatable object modules.

The package is written in structured MACRO-11, with identical specifications across operating systems. Dynamic memory-expansion techniques are used when supported by the operating system. The RSX and VMS (AME) implementations offer a virtual symbol table for unlimited symbol table storage. The binary license fee includes renewable support. Documentation is included.

A version of this product is available for the PDP-11 computer.

Price: \$1000

Contact: Arthur Gaughan
(215) 699-9658

SKIPPACK SYSTEMS GROUP
P.O. Box 1595
North Wales, PA 19454

MACRO-65 6502 Cross-Development Tools

Operating System: VMS

Keywords: • Assemblers • Development tools
• Microprocessor development • Programming tools

Distribution media: RL02, RX01, RX02, RX03, RX50.

The relocating cross-assembler (MACRO-65), multifunction linker (LINK-65), and object librarian (LIBRRN) provide a comprehensive cross-development facility for RAM- and ROM-based 6502 systems. MACRO-65 features MACRO-11 pseudoops, manufacturer/DIGITAL-style mnemonics, MACRO-11 macro capability, and full 6502 support. LINK-65 provides ROM/RAM segmentation based on .PSECT directives, with output in binary, Motorola, Intel, Tektronix, and other formats. LIBRRN provides a compact storage and retrieval capability for relocatable object modules.

The package is written in structured MACRO-11, with identical specifications across operating systems. Dynamic memory-expansion techniques are used when supported by the operating system. The RSX and VMS (AME) implementations offer a virtual symbol table for unlimited symbol table storage. The binary license fee includes renewable support. Documentation is included.

A version of this product is available for the PDP-11 computer.

Price: \$1000

Contact: Arthur Gaughan
(215) 699-9658

SKIPPACK SYSTEMS GROUP

P.O. Box 1595

North Wales, PA 19454

MACRO-68 MC68000/10 Cross-Development Tools

Operating System: VMS

Keywords: • Assemblers • Development tools
• Microprocessor development • Programming tools

Distribution media: RL02, RX01, RX02, RX03, RX50.

The relocating cross-assembler (MACRO-68), structured assembly language (SCAT-68), multifunction linker (LINK-68), and object librarian (LIBRRN) provide a cross-development facility for RAM- and ROM-based 68000/10 systems. MACRO-68 features MACRO-11 pseudoops, manufacturer/DIGITAL-style mnemonics, MACRO-11 macro capability, and full MC68000/08/10 support. SCAT-68 provides IF..THEN..ELSE, REPEAT..UNTIL, WHILE..DO, CASE..ELSE, and logical and arithmetic constructs with unary and binary operators. LINK-68 provides ROM/RAM segmentation based on .PSECT directives, with output in binary, Motorola, Intel, Tektronix, and other formats. LIBRRN provides a compact storage and retrieval capability for relocatable object modules.

The package is written in structured MACRO-11, with identical specifications across operating systems. Dynamic memory-expansion techniques are used when supported by the operating system. The RSX and VMS (AME) implementations offer a virtual symbol table for unlimited symbol table storage. The binary license fee includes renewable support. Documentation is included.

A version of this product is available for the PDP-11 computer.

Price: \$1500

Contact: Arthur Gaughan
(215) 699-9658

SKIPPACK SYSTEMS GROUP
P.O. Box 1595
North Wales, PA 19454

MACRO-80 8080/8085 Cross-Development Tools

Operating System: VMS

Keywords: • Assemblers • Development tools
• Microprocessor development • Programming tools

Distribution media: RL02, RX01, RX02, RX03, RX50.

The relocating cross-assembler (MACRO-80), multifunction linker (LINK-80), and object librarian (LIBRRN) provide a comprehensive cross-development facility for RAM- and ROM-based 8080/8085 systems. MACRO-80 features MACRO-11 pseudoops, manufacturer/DIGITAL-style mnemonics, MACRO-11 macro capability, and full 8080/8085 support. LINK-80 provides ROM/RAM segmentation based on .PSECT directives, with output in binary, Motorola, Intel, Tektronix, and other formats. LIBRRN provides a compact storage and retrieval capability for relocatable object modules. The package is written in structured MACRO-11, with identical specifications across operating systems. Dynamic memory-expansion techniques are used when supported by the operating system. The RSX and VMS (AME) implementations offer a virtual symbol table for unlimited symbol table storage. The binary license fee includes renewable support. Documentation is included.

A version of this product is available for the PDP-11 computer.

Price: \$1000

Contact: Arthur Gaughan
(215) 699-9658

SKIPPACK SYSTEMS GROUP
P.O. Box 1595
North Wales, PA 19454

MACRO-86 8086/8088 Cross-Development Tools

Operating System: VMS

Keywords: • Assemblers • Development tools
• Microprocessor development • Programming tools

Distribution media: RL02, RX01, RX02, RX03, RX50.

The relocating cross-assembler (MACRO-86), multifunction linker (LINK-86), and object librarian (LIBRRN) provide a comprehensive cross-development facility for RAM- and ROM-based 8086/8088 systems. MACRO-86 features MACRO-11 pseudoops, manufacturer/DIGITAL-style mnemonics, MACRO-11 macro capability, and

full 8086/8088 support. LINK-86 provides ROM/RAM segmentation based on .PSECT directives, with output in binary, Motorola, Intel, Tektronix, and other formats. LIBRRN provides a compact storage and retrieval capability for relocatable object modules. The package is written in structured MACRO-11, with identical specifications across operating systems. Dynamic memory-expansion techniques are used when supported by the operating system. The RSX and VMS (AME) implementations offer a virtual symbol table for unlimited symbol table storage. The binary license fee includes renewable support. Documentation is included.

A version of this product is available for the PDP-11 computer.

Price: \$1500

Contact: Arthur Gaughan
(215) 699-9658

SKIPPACK SYSTEMS GROUP
P.O. Box 1595
North Wales, PA 19454

MACRO-8K Z-8000/1/2/3/4 Cross-Development Tools

Operating System: VMS

Keywords: • Assemblers • Development tools
• Microprocessor development • Programming tools

Distribution media: RL02, RX01, RX02, RX03, RX50.

The relocating cross-assembler (MACRO-8K), structured assembly language (SCAT-8K), multifunction linker (LINK-8K), and object librarian (LIBRRN) provide a comprehensive cross-development facility for RAM- and ROM-based Z8000 systems. MACRO-8K features MACRO-11 pseudoops, manufacturer/DIGITAL-style mnemonics, MACRO-11 macro capability, and full Z8000/1/2/3/4 support. SCAT-8K provides IF..THEN..ELSE, REPEAT..UNTIL, WHILE..DO, CASE..ELSE, and logical and arithmetic constructs with unary and binary operators. LINK-8K provides ROM/RAM segmentation based on .PSECT directives, with output in binary, Motorola, Intel, Tektronix, and other formats. LIBRRN provides a compact storage and retrieval capability for relocatable object modules.

The package is written in structured MACRO-11, with identical specifications across operating systems. Dynamic memory-expansion techniques are used when supported by the operating system. The RSX and VMS (AME) implementations offer a virtual symbol table for unlimited symbol table storage. The binary license fee includes renewable support. Documentation is included.

A version of this product is available for the PDP-11 computer.

Price: \$1500

Contact: Arthur Gaughan
(215) 699-9658

SKIPPACK SYSTEMS GROUP
P.O. Box 1595
North Wales, PA 19454

MACRO-MC MC6800/01/02/03/08 Cross-Development Tools

Operating System: VMS

Keywords: • Assemblers • Development tools
• Microprocessor development • Programming tools

Distribution media: RL02, RX01, RX02, RX03, RX50.

The relocating cross-assembler (MACRO-MC), multifunction linker (LINK-MC), and object librarian (LIBRRN) provide a cross-development facility for RAM- and ROM-based 680x systems. MACRO-MC features MACRO-11 pseudoops, manufacturer/DIGITAL-style mnemonics, MACRO-11 macro capability, and full 6800/01/02/03/08 support. LINK-MC provides ROM/RAM segmentation based on .PSECT directives, with output in binary, Motorola, Intel, Tektronix, and other formats. LIBRRN provides a compact storage and retrieval capability for relocatable object modules.

The package is written in structured MACRO-11, with identical specifications across operating systems. Dynamic memory-expansion techniques are used when supported by the operating system. The RSX and VMS (AME) implementations offer a virtual symbol table for unlimited symbol table storage. The binary license fee includes renewable support. Documentation is included.

A version of this product is available for the PDP-11 computer.

Price: \$1000

Contact: Arthur Gaughan
(215) 699-9658

SKIPPACK SYSTEMS GROUP
P.O. Box 1595
North Wales, PA 19454

MACRO-Z8 Z-80 Cross-Development Tools

Operating System: VMS

Keywords: • Assemblers • Development tools
• Microprocessor development • Programming tools

Distribution media: RL02, RX01, RX02, RX03, RX50.

The relocating cross-assembler (MACRO-Z8), multifunction linker (LINK-Z8), and object librarian (LIBRRN) provide a comprehensive cross-development facility for RAM- and ROM-based Z-80 systems. MACRO-Z8 features MACRO-11 pseudoops, manufacturer/DIGITAL-style mnemonics, MACRO-11 macro capability, and full Z-80 support. LINK-Z8 provides ROM/RAM segmentation based on .PSECT directives, with output in binary, Motorola, Intel, Tektronix, and other formats. LIBRRN provides a compact storage and retrieval capability for relocatable object modules. The package is written in structured MACRO-11, with identical specifications across operating systems. Dynamic memory-expansion techniques are used when supported by the operating system. The RSX and VMS (AME) implementations offer a virtual symbol table for unlimited symbol table storage. The binary license fee includes renewable support. Documentation is included.

A version of this product is available for the PDP-11 computer.

Price: \$1000

Contact: Arthur Gaughan
(215) 699-9658

SKIPPACK SYSTEMS GROUP
P.O. Box 1595
North Wales, PA 19454

MACROSPITBOL for PDP-11 and VAX

Operating System: VMS

Keywords: • Data conversion • Programming tools

SPITBOL is an implementation of the SNOBOL4 programming language. SPITBOL is available with a high degree of compatibility on a range of computers running different operating systems. (The SNOBOL4 programming language is described in *The SNOBOL4 Programming Language*, 2nd Edition by Griswold, Poage, and Polonsky from Prentice-Hall.)

A version of this product is available for the PDP-11 computer.

Price: \$600 - \$1195

Contact: Susan Anderson Houcek
(312) 524-1644

DEWAR INFORMATION SYSTEMS CORP.
221 W. Lake Street
Oak Park, IL 60302

MacVAX

Operating System: ULTRIX-32, UNIX* (System V), VMS

Keywords: • Diagnostics • Programming tools • Translators

This collection of programs translates source programs from MACRO-11 assembly language to VAX assembly language and handles macros, conditional assembly, radix conversion, repeat blocks, multiple sections, and symbolic assignments, as well as machine instructions and data declarations. The resulting VAX code retains the original comments, is understandable, and can be maintained without referring to the original PDP-11 program(s).

MacVAX automatically separates PDP-11 programs into code and data areas and models the PDP-11 stack in the data area. Programs can be any size, but data is limited to a 64KB area. PDP-11 registers are modeled using the VAX registers R0-R6 and PC.

The code translation is very efficient, with a significant degree of optimization. MacVAX uses multiple passes to eliminate unneeded instructions, particularly as they relate to the setting and testing of condition-code values.

MacVAX can translate 98% or more of a PDP-11 assembly language program automatically. Error messages and warnings clearly indicate which PDP-11 statements require programmer attention. MacVAX has been successfully used to translate complicated programs with a minimum of programmer effort.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$10,000

Contact: Ralph W. Swearingen, President
(415) 935-4944

VIRTUAL SYSTEMS, INC.
1500 Newell Avenue, Suite 406
Walnut Creek, CA 94596

MAINSAIL™ Compiler

Operating System: ULTRIX-32, VMS

Keywords: • Compilers • Programming tools

This sophisticated, high-level, general-purpose programming language supports true source-level portability across computing systems. The MAINSAIL language supports a portable notion of intermodule communication. Modules are both the unit of compilation and the unit of execution. There is no static linkage of modules; modules are dynamically linked during execution. Modules communicate through "interface fields" consisting of data and procedures. Determination of which modules make up a program occurs dynamically. Modules can be allocated and disposed under explicit programmer control. Module libraries can contain any number of object modules and can support module sharing among multiple users.

The compiler is written in MAINSAIL and develops MAINSAIL applications. Thus, the compiler can be used on all computer systems, since the source language is identical across every system. The MAINSAIL compiler generates pure, position-independent, reentrant target machine code. The output of the compiler is ready-to-run binary code, eliminating use of the host system linkage editor. The compiler's code generators are written in MAINSAIL, providing cross-compilation from one system to another with the same output results, regardless of where the code generator is used.

A version of this product is available for the PDP-11 computer.

Price: \$2770 - \$22,050

Contact: Greg Jirak
(415) 324-8745

XIDAK, INC.

530 Oak Grove Avenue, Suite 101
Menlo Park, CA 94025

Meta Assembler for Bit-Slice Microprocessors

Operating System: ULTRIX-32, VMS

Keywords: • Assemblers • Microprocessor development
• Pre- and postprocessors • Programming tools

The Meta Assembler, used with the bit-slice processor such as the 2901 or 10800, consists of three FORTRAN programs that allow users to define their own assembly language.

The definition program allows the user to define instruction mnemonics and their associated formats. Instruction lengths may vary from 1 to 128 bits. An instruction format is defined by breaking the microword into fields and defining the fields as constants, don't-care bits, or variables filled in at assembly time. The definition file produced by this program is used by the assembly program as a reference when assembling a program.

The assembly program operates like a traditional assembler. A symbolic source program, the mnemonics and symbols defined in the definition program, is read as input, and a listing and object module are generated as output. The instruction syntax and assembler directives are compatible with those used by AMD in its literature and software products. Additional directives provide for versatile listing and output controls. Conditional assembly statements and full cross-reference tables are provided in both programs.

The prom formatter program reads the object module file produced by the assembly program and translates the format into one that can be read by a PROM programmer. BNPF, Data I/O, ASCII hexadecimal, and the STEP engineering format are supported. Microwords in the object module can be broken up into organizations that are compatible

with the target PROM/ROM array. Users may specify PROMs of any width and length, as well as the value of don't-care bits. Any or all PROMs may be listed and/or punched.

The Macro Meta Assembler, an enhanced version of the set of programs above, has a powerful macro facility that enables the user to define multiword microinstructions using a single mnemonic, to encode non-continuous variable fields, and to create complex overlaid instructions. In addition, character strings may be passed to macros, symbols may be concatenated and declared as local or global, and some arithmetic operators have been added.

Although those enhancements apply to the definition and the assembly programs, even the prom formatter has been enhanced by adding the ability to generate parity bits and to switch and/or overlay specified columns. Taken together, those program improvements represent a significant increase in the power of this program set.

A version of this product is available for the PDP-11 computer.

Price: \$1800 - \$2500

Contact: Peggy Hall
(408) 733-2919

MICROTEC RESEARCH, INC.

505 W. Olive, Suite 325, P.O. Box 60337
Sunnyvale, CA 94088

Micro Concurrent Pascal (mCP) Cross-Compiler

Operating System: VMS

Keywords: • Assemblers • Compilers • Language enhancers
• Microprocessor development

Micro Concurrent Pascal (mCP) is a high-level language for programming real-time embedded systems. The mCP implements Per Brinch Hansen's Concurrent Pascal, which supports processes and monitors. Programs compile into either pseudocode (P-code), which may be interpreted, or native assembly language code, for most popular microprocessors. Programs may be compiled on a host computer and the outputted P-code interpreted or native code executed on the target microprocessor.

Designed for microcomputer use, the P-code is reentrant, relocatable, PROMable, and often more space-efficient than assembler. The mCP features include interrupt-handling capabilities with language constructs for writing device drivers, absolute hardware addressing, and assembly language routine calls. The mCP compiler resides on any system supporting sequential Pascal, and the source code is available. The interpreter/kernel source is provided for the Z80, 8080/8085, 6809, 1802, Z8000, 8086/8088, LSI-11, and the 68000. An mCP user's guide and mCP seminar are also available.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Thomas F. Loschiavo
(215) 362-0966

ENERTEC, INC.

19 Jenkins Avenue

Lansdale, PA 19446

microMAGIC Microprocessor Software Development Package

Operating System: VMS

Keywords: • Development tools • Microprocessor development
• Programming tools

Distribution medium: 800/1600 bpi magnetic tape.

The microMAGIC package allows users to develop and test software in a multiuser environment for a variety of 16-bit microprocessors, including DIGITAL's LSI-11s and FALCON, Intel's 8086 and 8088, and Motorola's 6809 and 68000. The application task is programmed in the block-structured, standard ALGOL-based high-level language RTL/2 and is compiled on the host minicomputer. The annotated assembler produced by the compilers is assembled and linked on the minicomputer, producing a loadable memory image. Application testing is carried out from the host computer through an RS232 link to the attached microprocessor. The test controller utility loads the user program into RAM on the microprocessor and controls target machine execution. Debugging commands include assembler-level breakpoint setting, single stepping, examination and alteration of registers and memory, and logging of the test session.

The microMAGIC Software Development Package includes standard high-level language; standard real-time executive on target micro, providing multitasking, asynchronous and synchronous message passing, operator communication, and interrupt handling; linker-produced automatic ROM/RAM split; and compressed RAM image optionally produced for ROM insertion and automatic system startup.

The package includes macroprocessor, compiler, assembler, linker, and test controller. A real-time multitasking executive is provided for the target microprocessor.

A version of this product is available for the PDP-11 computer.

Price: \$7500 - \$15,000

Contact: Robert F. Swanson
(201) 865-6550

INTELLIGENT INDUSTRIAL SYSTEMS, INC.

300 Harmon Meadow Boulevard

Secaucus, NJ 07094

Microtec C Compilers for 8080/8085 and Z80

Operating System: ULTRIX-32, UNIX* (Berkeley), VMS

Keywords: • Compilers • Cross-compilers

• Microprocessor development • Programming tools

This software package implements software for embedded microprocessor applications. It is easy to intermix C and assembly-language modules and to replace or customize the run-time library.

Because microprocessor-based systems generally implement separate ROM and RAM memory space, Microtec C permits executable code and constants to be located in one memory section, while data can be relegated to another memory section.

The compiler can produce an intermixed listing of C statements and generated microprocessor instructions. Other compilation switches give the user a variety of services, from controlling run-time error checking to directing that code be generated with a preference for diminished execution time rather than memory space. Microtec C also contains some extensions; for example, identifiers can be any length, all characters of nonexternal identifiers are significant, and arithmetic operations on CHAR type data are performed with no conversion to integers.

The compiler accepts the full C language as defined in Appendix A of *The C Programming Language*, by Brian W. Kernighan and Dennis M. Ritchie (Prentice-Hall, 1978), with the extensions defined by Dennis M. Ritchie and *The C Programming Language-Reference Manual*, in *UNIX Programmer's Manual* (Volume 2, Seventh Edition, 1979).

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$3000 - \$7500

Contact: Peggy Hall

(408) 733-2919

MICROTEC RESEARCH, INC.

505 W. Olive, Suite 325, P.O. Box 60337

Sunnyvale, CA 94088

MODEL (Multioptimal Differential Equation Language)

Operating System: VMS

Keywords: • CAD/CAM • Engineering • Graphics

• Mechanical engineering

Distribution medium: 9-track 1600 bpi magnetic tape.

This processor generates numerical solutions of systems described by ordinary differential equations or a combination of differential and sampled-data equations. The notation used in the MODEL language is similar to that used to describe physical systems in the literature. Thus, learning, programming, and debugging are more readily accomplished. MODEL helps in the analysis of physical systems, including

mechanical systems, sophisticated control systems, and combinations of mechanical and control systems. Programs written in the MODEL language are translated into FORTRAN code by the MODEL processor. That code is then executed to generate the numerical solution.

Several dialects of the MODEL language are available to the systems analyst. The basic interactive version (MODEL I) accepts systems of differential equations that will be translated into interactive FORTRAN simulations. The sampled-data interactive version of MODEL (MODEL S) accepts systems of differential and sampled-data equations, which are machine translated into FORTRAN simulations having the interactive features of MODEL I. MODEL C accepts a representation of a controller and external disturbances described by differential equations. The MODEL processor is written in FORTRAN IV and MACRO ASSEMBLER. The processor has been implemented on DIGITAL VAX-11/780 and PDP-11/45 computers. The processor generates graphs either for CRTs, such as the Tektronix 4006, 4010, and so on, or for dot matrix printers, such as the Versatec 11004, Varian 4211, or VAX Printronix.

Price: \$1200

Contact: Ruthann Jones
(404) 542-3265

NASA'S COMPUTER SOFTWARE MGT. AND INFO.
CENTER
University of Georgia, 112 Barrow Hall
Athens, GA 30605

MODULA-2/68®-CD

Operating System: MicroVMS, ULTRIX-32, VMS

Keywords: • Cross-compilers • Microprocessor development

Distribution media: 9-track magnetic tape, diskette, TU58 DECtape II cartridge.

This complete implementation of the Modula-2 language is for the cross-development of application programs. From a host computer system, MODULA-2/68-CD produces optimized machine language for the Motorola MC68000 series of microprocessors.

This development tool produces standard Motorola S-record output, symbol table information, code and data at specific base addresses, and access to previously linked code and data. Documentation includes a user's manual, release notes, and installation instructions.

Price: \$495 - \$1800

Contact: Stan Osborne
(415) 661-6868

DJAVAHERI BROS.
697 Saturn Court, P.O. Box 4759
Foster City, CA 94404-0759

M/VX**Operating System:** VMS**Keywords:** • Compilers • Data base management
• Interpreters • Software utilities

This easy-to-use programming system takes advantage of the 32-bit virtual memory of DIGITAL's VAX computers. M/VX includes the MUMPS programming language, a data base system, and a complete set of utilities. M/VX provides high throughput and multiple-language capability to many interactive users. Unlike other MUMPS implementations on the VAX, no tradeoffs occur in performance. Seven hundred seventy global sets/second, 48 or more interactive users, and 1-second response time are routine. The system has more than twice the throughput and more than twice as many on-line users as other MUMPS implementations.

M/VX offers full ANSI Standard (X11.1-1977) with all 1983 enhancements, runs concurrently with other languages under VMS, eliminates manual conversions with the translator, handles ASCII and EBCDIC tape formats directly, supports networking to both VAX and PDP-11 MUMPS systems, and installs in less than half an hour.

Price: \$3900 - \$49,900

Contact: David Rozewski
(617) 227-1555
INTERSYSTEMS CORP.
210 Commercial Street
Boston, MA 02109

MWC86 Cross-Compiler**Operating System:** VMS**Keywords:** • Compilers • Cross-compilers • Programming tools

This C compiler generates 8086/8088 object code in OMF form, which conforms to the Intel Universal Development Interface (UDI). MWC86 supports the full C language, as described in *The C Programming Language* by Kernighan and Ritchie. MWC86 has an extensive C library and routines that interface directly with UDI calls. MWC86 produces object modules that conform to either the SMALL or LARGE model of computation. True register variables are implemented, giving small and fast executing code. Extensions to this product include the void and enum data arguments and returning structures.

Price: \$6000

Contact: Diane Treacy or Julie Stewart
(312) 472-6659
MARK WILLIAMS CO.
1430 W. Wrightwood Avenue
Chicago, IL 60614

OPS5

Operating System: VMS

Keywords: • Artificial intelligence • Decision support
• Interpreters • Programming tools

Distribution medium: 9-track 1600 bpi magnetic tape.

OPS5 for VAX/VMS is a high-performance DIGITAL-engineered implementation of the OPS5 language as described in the *OPS5 User's Manual* by Charles L. Forgy, Department of Computer Science, Carnegie-Mellon University. OPS5 is a production system language for applications in the expert systems and cognitive psychology areas of artificial intelligence. Application areas include aeronautics/aerospace, petroleum, process control, and scheduling.

A production system consists of if-then statements yet differs from a conventional language with an if-then structure in the flow of control of the program at run time. Typically, one if-then statement, or rule, requires two blocks, or 1KB, of storage.

Refer to SPD #A3.12.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$1000 – \$5000

Contact: Consult your local DIGITAL sales office (see Introduction).

PAS-32000 (Pascal Cross-Compiler for National Semiconductor 32000)

Operating System: ULTRIX-32, VMS

Keywords: • Compilers • Cross-compilers
• Microprocessor development

This product, developed by Green Hills, is a fully optimizing ANSI-standard Pascal compiler that may be configured as a resident compiler or as a VAX cross-compiler. The compiler performs global optimizations that are commonly found on mainframe compilers — Register Allocation by Coloring, Very Busy Expression Analysis, Copy Propagation, Common Subexpression Elimination, and Strength Reduction — in addition to standard microprocessor compiler optimizations — folding constant expressions, conversion of multiplies to shifts whenever possible, elimination of redundant jumps, and unreachable code.

This compiler generates 30% less code than portable UNIX* PC compiler, works with NS16081 floating-point unit, and provides complete ANSI Pascal compatibility; complete IEEE floating-point support; 1-pass design, with integrated preprocessor for maximum throughput; generated code that runs up to four times faster than portable UNIX* PC compiler; extensive loop optimizations; advanced compiler techniques to reduce space; and calling-sequence compatibility with all Green Hills compilers.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: Available upon request

Contact: Joel Schacht

(617) 491-4180

OASYS

60 Aberdeen Avenue

Cambridge, MA 02138

PAS-68000 (Pascal Cross-Compiler for Motorola 68000)

Operating System: ULTRIX-32, UNIX* (Berkeley, System III, System V), VMS

Keywords: • Compilers • Cross-compilers
• Microprocessor development • Programming tools

This product, developed by Green Hills, is a fully optimizing ANSI-standard Pascal compiler for the Motorola 68000-series microprocessors that can be configured as a resident compiler or as a VAX cross-compiler. The compiler performs global optimizations that are commonly found on mainframe compilers — for example, Register Allocation by Coloring, Very Busy Expression Analysis, Copy Propagation, Common Subexpression Elimination, and Strength Reduction — in addition to standard microprocessor compiler optimizations — for example, folding constant expressions, conversion of multiplies to shifts whenever possible, and elimination of redundant jumps and unreachable code.

This compiler generates 30% less code than the portable UNIX* PC compiler and works with the MC68000 floating-point unit. The compiler provides complete ANSI Pascal compatibility, complete IEEE floating-point support, 1-pass design with an integrated preprocessor for maximum throughput, generated code that runs up to four times faster than the portable UNIX* PC compiler, extensive loop optimizations, advanced compiler techniques to reduce space, and calling-sequence compatibility with all Green Hills compilers.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Joel Schacht

(617) 491-4180

OASYS

60 Aberdeen Avenue

Cambridge, MA 02138

Pascal

Operating System: MicroVMS, VMS

Keywords: • Compilers • Debugging • Programming tools

Distribution media: 9-track 1600 bpi magnetic tape, RA60, RL02, RX01, RX50, TK50, TU58 DECtape II cartridge.

VAX Pascal is a superset of standard Pascal and includes many powerful extensions to permit more programming versatility. The extensions provide exponentiation functions, string-handling facilities, type casting, separate compilation of procedures and functions, and sophisticated error-handling facilities.

VAX Pascal accepts programs compatible with ISO standard 7185-1983 levels 0 and 1, ANSI/IEEE standard 770X3-97 1983, and the Federal Information Processing Standard Publication (FIPS-109). VAX Pascal allows for full use of the VAX Symbolic Debugger to help programmers find errors in application programs and can be used with the full set of VAX/VMS Programmer Productivity Tools and VMS utilities.

Refer to SPD #25.11.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$473 - \$7100

Contact: Consult your local DIGITAL sales office (see Introduction).

Pascal-2

Operating System: ULTRIX-32, VMS

Keywords: • Compilers • Cross-compilers • Debugging
• Programming tools

Memory required: 32K. Distribution media: 5¼" and 8" diskette, 800/1600 bpi magnetic tape, RX05, RL01, RL02.

The Pascal-2 system development package, written in Pascal, consists of an optimizing Pascal compiler; an interactive, source-level debugger; a profiler that pinpoints execution bottlenecks; and other utilities to aid program development.

A version of this product is available for the PDP-11 computer.

Price: \$1250 - \$4500

Contact: Mary Erichsen
(503) 245-2202

OREGON SOFTWARE
6915 S.W. Macadam Avenue
Portland, OR 97219

Pascal Cross-Compiler for 8080/8085 and Z80

Operating System: ULTRIX-32, VMS

Keywords: • Compilers • Cross-compilers
• Microprocessor development • Programming tools

This software package is used for microprocessor-based digital systems design. It is easy to intermix Pascal and assembly-language modules and to replace or customize the Pascal run-time library.

Because microprocessor-based systems generally implement separate ROM and RAM memory space, Microtec Pascal permits executable code and constants to be located in one memory section, while data can be relegated to another memory section. The compiler translates nearly the full ISO standard Pascal to native 8080 or Z80 assembly languages.

The Microtec Pascal extensions to standard Pascal are separate compilation, bit manipulation, interrupt procedures, direct memory accessing, and 14-digit floating-point (real) numbers. The software interface to the floating-point arithmetic routines is straightforward and may be easily modified to interface with some other floating-point process.

The compiler can optionally produce an intermixed listing of Pascal statements and generated microprocessor instructions. Other compilation switches give the user a variety of services, from controlling run-time error checking to directing that code be generated with a preference for diminished execution time rather than memory space.

A version of this product is available for the PDP-11 computer.

Price: \$3000 - \$7500

Contact: Peggy Hall
(408) 733-2919

MICROTEC RESEARCH, INC.

505 W. Olive, Suite 325, P.O. Box 60337
Sunnyvale, CA 94088

Pascal Native and Pascal Cross-Compilers

Operating System: VMS

Keywords: • Compilers • Cross-compilers • Programming tools
• Translators

The Pascal Native Compiler operates in four sequential passes, producing three intermediate files, each comparable in size to the source code being compiled. The installation kit consists of the C Native Compiler, which has the preprocessor (pp), the parser (p1), and the code generator (p2). The Pascal Translator (ptc) and the Pascal support library are included. The C Library, containing the Portable Library (clib), the System Interface Library for the host operating system, and the Machine Interface Library for the host machine, are also included in the installation kit.

The Pascal Cross-Compiler includes a Pascal Native Compiler, plus an additional Pascal support library compiled for the second target machine.

A version of this product is available for the PDP-11 computer.

Price: \$700 – \$2200

Contact: Christina B. Hanley
(617) 369-8499

WHITESMITHS, LTD.

97 Lowell Road

Millbrook Tarry

Concord, MA 01742

Pascal VAX to MC68000 Cross-Compiler

Operating System: VMS

Keywords: • Cross-compilers • Microprocessor development
• Source code control

This cross-compiler permits, on the VAX line of equipment, Pascal compilations that produce native assembly language code for the MC68000. The compiler supports a large superset of the ANSI/IEEE/ISO standards and can be conveniently retargeted to other micros.

Deliverables include all the necessary reference and internal manuals, source programs, personnel training, and distribution rights. The compiler is not available directly to end users, but inquiries from equipment manufacturers, OEMs, and distributors are invited.

Price: Available upon request

Contact: George Finckenor
(212) 696-3600

ADVANCED COMPUTER TECHNIQUES

16 East 32nd Street

New York, NY 10016

Pascal-xii

Operating System: UNIX* (System III), VMS

Keywords: • Compilers • Cross-compilers
• Language enhancers

This family of cross-compilers runs on DIGITAL PDP-11, LSI-11, and VAX/VMS hosts. Versions of Pascal-xii are available for the Z80 and 6809 targets only.

Pascal-xii is a true ISO level 0 Pascal with several important extensions, including the ability to link externally compiled modules and separately assembled assembly-language routines with main programs. Pascal-xii is a multipass compiler that produces as output a meta-assembly language source file called E-PAL (Enhanced Pascal Assembly Language). The E-PAL is further processed by the corresponding SUPERMAX cross-assembler in conjunction with a CYM-RIC-supplied macro library, producing a relocatable object file.

1142 Language Processors

The output of the cross-assembler is then linked with a run-time library also provided by CYMRIC as part of the Pascal-xii package. The resulting load module may be directly down-line loaded to hardware or used to produce ROMs.

Hard-copy documentation is provided with the packages, as well as a 1-year limited warranty.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$1000

Contact: Mark P. White
(617) 938-0709

CYMRIC COMPUTER SYSTEMS, INC.
10 G. Roessler Road
Woburn, MA 01801

PDL and PDL/81 (Program Design Language)

Operating System: ULTRIX-32, UNIX* (Berkeley, System III, System V), VMS

Keywords: • Communications • Programming tools

PDL is both a software design tool and an excellent medium for communication.

- As a software design tool, PDL encourages structured, efficient designs that result in code that is cleaner, easier to read, and generated in much less time than normal.

PDL is easy to use. Users need no formal training and very little practice. PDL provides a first-rate design methodology that designers want to use.

- As a medium for communication, PDL is a major contributor to successful project control. PDL provides complete and understandable documentation before programming begins. Since changes are easily incorporated, the program and the programmer are always kept up to date.

PDL is a complete replacement for flowcharts and is suitable for use with most software design methodologies.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: £3300 - £4700

Contact: Graham Evans
44-(438) 316311

WARREN POINT INTERNATIONAL, LTD.
Babbage Road
Stevenage, Herts SG1 2EQ
United Kingdom

PDP-11 FORTRAN-77 DEBUG/VAX to RSX**Operating System:** VMS**Keywords:** • Debugging • Documentation • Programming tools**Distribution media:** RX01, TU58 DECtape II cartridge.

This fully symbolic debugger for FORTRAN-77 and MACRO-11 programs running on VAX/VMS under VAX-11 RSX is a tool to aid in finding the location of programming errors in successfully compiled programs that do not execute properly. PDP-11 FORTRAN-77 DEBUG runs as a 2-task debugger. A small portion of the code, necessary to debug applications, is linked with the user task, and the major portion of the debugger runs as a separate task.

The debugger provides access to program symbols by reading the symbol table file produced by the task builder. PDP-11 FORTRAN-77 DEBUG can understand symbols produced by PDP-11 FORTRAN-77 and MACRO-11.

Refer to SPD #26.75.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$480 - \$800**Contact:** Consult your local DIGITAL sales office (see Introduction).**PHILON FAST/BASIC-C****Operating System:** MicroVMS, ULTRIX-32, ULTRIX-32m**Keywords:** • Compilers

Memory required: 128K bytes. **Distribution media:** diskette, streaming or magnetic tape.

This compiler, written in C, contains a powerful set of run-time libraries and file and string-handling capabilities and uses proprietary optimization routines to produce highly efficient code and common intermediate code (Phi-Code). Software features include highly optimized program code for execution speed; file management capabilities, using a records manager with ISAM support, optimized for maximum I/O throughput; environment-independent intermediate code (Phi-Code); run-time libraries, subroutines, and file and string-handling capabilities; and easy-to-read error messages at compile and run time.

Price: \$600 - \$5000**Contact:** Irene Lebovics

(212) 807-0303

PHILON INC.

641 Avenue of the Americas

New York, NY 10011

PHILON FAST/BASIC-M**Operating System:** MicroVMS, ULTRIX-32, ULTRIX-32m**Keywords:** • Compilers

Memory required: 128K bytes. Distribution media: diskette, streaming or magnetic tape.

This compiler, written in C, contains a powerful set of run-time libraries and file and string-handling capabilities and uses proprietary optimization routines to produce highly efficient code and common intermediate code (Phi-Code). Software features include highly optimized program code for execution speed; file management, using a records manager with ISAM support, optimized for maximum I/O throughput; environment-independent intermediate code (Phi-Code); run-time libraries, subroutines, and file and string-handling capabilities; and easy-to-read error messages at compile and run time.

Price: \$600 – \$5000

Contact: Irene Lebovics
(212) 807-0303

PHILON INC.
641 Avenue of the Americas
New York, NY 10011

PHILON FAST/COBOL

Operating System: MicroVMS, ULTRIX-32, ULTRIX-32m

Keywords: • Compilers

Memory required: 150K bytes. Distribution media: diskette, streaming or magnetic tape.

This GSA-certified high-level compiler, written in C with syntax compatible to the ANSI '74 standard, provides an extremely fast execution of program code — up to 50 times faster than those applications developed with other compilers. Software features include highly optimized program code for superior execution speed; file management, using a records manager with ISAM support, optimized for maximum I/O throughput; environment-independent intermediate code (Phi-Code); run-time libraries, subroutines, and file and string-handling capabilities; and easy-to-read error messages at compile and run time.

Price: \$2200 – \$7500

Contact: Irene Lebovics
(212) 807-0303

PHILON INC.
641 Avenue of the Americas
New York, NY 10011

PHILON FAST/FORTRAN

Operating System: MicroVMS, ULTRIX-32, ULTRIX-32m

Keywords: • Application development • Compilers

Memory required: 150K bytes. Distribution media: diskette, streaming or magnetic tape.

This compiler, written in C, implements ANSI standard FORTRAN-77, uses proprietary optimizing routines, and generates highly efficient code. PHILON FAST/FORTRAN also provides a productive scientific and engineering application development environment.

Software features include highly optimized program code for execution speed; file management, using a records manager with ISAM support, optimized for maximum I/O throughput; environment-independent intermediate code (Phi-Code); computational accuracy; run-time libraries, subroutines, and file and string-handling capabilities; and easy-to-read error messages at compile and run time.

Price: \$1200 - \$6000

Contact: Irene Lebovics
(212) 807-0303

PHILON INC.
641 Avenue of the Americas
New York, NY 10011

PHILON FAST/Pascal

Operating System: MicroVMS, ULTRIX-32, ULTRIX-32m

Keywords: • Application development • Compilers

Memory required: 150K bytes. Distribution media: diskette, streaming or magnetic tape.

This compiler for application developers follows 160 standard specifications and provides an excellent programming environment for those in the scientific and educational communities. This tool is written in C and uses proprietary optimization routines to produce highly efficient code and common intermediate code (Phi-Code). Software features include superior execution speed of program code; extensive and specific diagnostic messages; an ULTRIX orientation, including the ability to reference external disk files to file data structures within programs, as well as ULTRIX-like compiler command syntax; exceptional computational accuracy; and comprehensive file management, using a records manager with ISAM support, optimized for maximum I/O throughput.

Price: \$1400 - \$7500

Contact: Irene Lebovics
(212) 807-0303

PHILON INC.
641 Avenue of the Americas
New York, NY 10011

PLAIN (Programming Language for Interaction)

Operating System: ULTRIX-32, UNIX* (Berkeley)

Keywords: • Cross-compilers • Data base management
• Information management • Programming tools

PLAIN, a Pascal-based language to support the development of reliable interactive information systems, provides important features for the development of interactive programs, including built-in relational data type, to support the definition and manipulation of relational data bases; built-in string data type; built-in pattern specification and pattern-matching facilities; and exception definition and handling. PLAIN also supports encapsulated data types (modules).

The implementation of PLAIN uses the Amsterdam Compiler Kit (developed at the Vrije Universiteit, Amsterdam, and distributed in the United States by Unipress, Inc.) as a back end. The Amsterdam Compiler Kit provides back ends for a variety of computer systems. Besides PLAIN, front ends exist for C, Pascal, and BASIC, among others.

PLAIN is part of the User Software Engineering distribution tool set. Commercial support and training are provided.

An unsupported distribution is available from User Software Engineering Distribution, University of California, San Francisco, Medical Information Science, Room A-16, San Francisco, CA 94143.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$3000 - \$8000

Contact: Anthony I. Wasserman
(415) 666-2951

INTERACTIVE DEVELOPMENT ENVIRONMENTS,
INC.

44 Monterey Boulevard, Suite 32
San Francisco, CA 94131

PL/I

Operating System: MicroVMS, VMS

Keywords: • Compilers • Data base management
• Programming tools • Scientific

Distribution media: 9-track 1600 bpi magnetic tape, RX01, RX50, TU58 DECTape II cartridge.

VAX PL/I is an extended implementation of the ANSI X3.74, American National Standard PL/I General Purpose Subset. VAX PL/I extensions include compatibility features with industry-standard implementations and ANSI full-language features as well as VAX/VMS system-specific features. VAX PL/I consists of a shareable compiler, a help facility, and INCLUDE files for system services. The VAX PL/I compiler generates optimized, position-independent machine code.

VAX PL/I is a comprehensive and powerful programming language that supports scientific computation, commercial data handling and data organization, and extensive string manipulation. The block structuring provided by the PL/I language helps to reduce the costs of program development and support.

Refer to SPD #25.30.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$797 – \$7970

Contact: Consult your local DIGITAL sales office (see Introduction).

Professional Host Tool Kit

Operating System: VMS

Keywords: • Application development • Compilers
• Language enhancers • Programming tools

Distribution media: RX01, TU58 DECtape II cartridge.

These programming tools and libraries allow development of applications for the Professional 300 computer systems. Programming languages available to the developer for building Professional-based applications are BASIC-PLUS-2, COBOL-81, DIBOL, FORTRAN-77, MACRO-11, and Pascal.

A host VAX/VMS, RSX-11M, or RSX-11M-PLUS system is used for application development. An editor provided with the host system is used to develop source files. MACRO-11 or a separately available Tool Kit language is used to assemble or compile the source program. The program is then linked against the libraries provided with the Tool Kit, and the frame builder is used to prepare the menu and help frames. The resultant files are then transferred to a Professional 350 or Professional 380 with hard disk for debugging.

Refer to SPD #30.28.xx when requesting further information on this product from your local DIGITAL sales office.

A version of this product is available for the PDP-11 computer.

Price: \$800

Contact: Consult your local DIGITAL sales office (see Introduction).

Professional Host Tool Kit BASIC-PLUS-2

Operating System: VMS

Keywords: • Application development • Cross-compilers
• Debugging • Programming tools

Distribution media: VAX: 9-track 1600 bpi magnetic tape, RX01 TU58 DECtape II cartridge.

This significantly extended BASIC compiler takes full advantage of the floating-point and integer instructions and generates threaded code. BASIC-PLUS-2 provides a high-performance program execution environment for applications development and timesharing.

An application is compiled on systems running RSX-11M, RSX-11M-PLUS, or VMS as part of the Professional Host Tool Kit and is subsequently linked and moved to the Professional 350 for debugging and execution.

Refer to SPD #30.27.xx when requesting further information on this product from your local DIGITAL sales office.

A version of this product is available for the PDP-11 computer.

Price: \$1200

Contact: Consult your local DIGITAL sales office (see Introduction).

Professional Host Tool Kit COBOL-81

Operating System: VMS

Keywords: • Compilers • Programming tools

Memory required: 256KB. Distribution media: 9-track 1600 bpi magnetic tape, RX01, TU58 DECTape II cartridge.

This high-level language for business data processing generates programs for execution under control of the P/OS operating system. Based on the ANSI COBOL Standard (X3.23-1974) and including some of the features planned for the next COBOL standard, this COBOL-81 is compatible with COBOL-81/RSX, is a subset of VAX COBOL, and includes various DIGITAL extensions to COBOL, including screen handling at the source language level.

Refer to SPD #30.31.xx when requesting further information on this product from your local DIGITAL sales office.

A version of this product is available for the PDP-11 computer.

Price: \$1200

Contact: Consult your local DIGITAL sales office (see Introduction).

Professional Host Tool Kit DIBOL

Operating System: VMS

Keywords: • Application development • Compilers
• Language enhancers • Programming tools

Distribution media: RX01, TU58 DECTape II cartridge.

This high-level procedural language for interactive business data processing allows development of DIBOL application programs for the Professional 300 series of computers on a VAX/VMS, RSX-11M, or RSX-11M-PLUS host system. The DIBOL program development process consists of compiling the DIBOL source program using the DIBOL-83 compiler, linking the object programs with external subroutines and library modules, and developing any required help or menu frames with the Frame Development Tool on the host system. The application and any frame files can then be transferred to the Professional system over a standard terminal interface line and executed and debugged on a Professional Series computer.

Professional Host Tool Kit DIBOL is based on the DIBOL Standards Organization's DIBOL-83 definition of the language. Professional Host Tool Kit DIBOL is highly compatible with DIBOL-83 implementations on other operating systems, including RSTS/E, RSX-11M-PLUS, CTS-300, and VAX/VMS, as well as PRO/Tool Kit DIBOL, which allows applications to be developed on the Professional 350 computer with hard disk. The language also provides Professional Series 300-specific extensions while retaining the capabilities and advantages of DIBOL-83.

Refer to SPD #30.26.xx when requesting further information on this product from your local DIGITAL sales office.

A version of this product is available for the PDP-11 computer.

Price: \$900 - \$1200

Contact: Consult your local DIGITAL sales office (see Introduction).

Professional Host Tool Kit FORTRAN-77

Operating System: VMS

Keywords: • Application development • Compilers
• Debugging • Programming tools

Memory required: 256KB. Distribution media: RX01, TU58 DECtape II cartridge.

This extended implementation of the ANSI subset FORTRAN-77 Standard (X3.9-1978) runs on the Professional 300 Series Applications Development System and contains the features of the ANSI FORTRAN-77 subset, many of the full-set language features, and extensions that are not included in the ANSI FORTRAN-77 Standard. Switch-selectable support is provided for user programs, based on the previous ANSI FORTRAN Standard (X3.9-1966).

Professional Host Tool Kit FORTRAN-77 meets the FIPS PUB-69 requirement for a flagger. The flagger optionally produces diagnostic messages for syntax and/or source form elements that do not conform to the full-level ANSI FORTRAN Standard (X3.9-1978).

An application is compiled on systems running RSX-11M, RSX-11M-PLUS, or VAX/VMS, as part of the Professional Host Tool Kit, and is subsequently linked and moved to the Professional 350 with hard disk for debugging and execution.

Refer to SPD #30.38.xx when requesting further information on this product from your local DIGITAL sales office.

A version of this product is available for the PDP-11 computer.

Price: \$780 - \$1200

Contact: Consult your local DIGITAL sales office (see Introduction).

Professional Host Tool Kit FORTRAN-77 DEBUG

Operating System: VMS

Keywords: • Debugging • Diagnostics • Programming tools

Distribution media: 9-track 800/1600 bpi magnetic tape, RK07, RL02, RX01, TU58 DECtape II cartridge.

This fully symbolic debugger for FORTRAN-77 and MACRO-11 runs on the Professional 300 Series Applications Development System and helps users locate programming errors in successfully compiled programs that do not execute properly. Professional Host Tool Kit FORTRAN-77 DEBUG runs as a 2-task debugger. A small portion of the code, necessary to debug applications, is linked with the user task. The major portion of the debugger runs as a separate task. The debugger provides access to program symbols by reading the symbol table file produced by the task builder on the host operating system and can understand symbols produced by Professional Host Tool Kit FORTRAN-77 and MACRO-11.

Refer to SPD #30.42.xx when requesting further information on this product from your local DIGITAL sales office.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Consult your local DIGITAL sales office (see Introduction).

Professional Host Tool Kit Pascal

Operating System: VMS

Keywords: • Application development • Compilers
• Language enhancers • Programming tools

Distribution media: RX01, TU58 DECtape II cartridge.

This extended implementation of the Pascal language helps the application programmer to access the P/OS system capabilities and simplifies application design. VAX Pascal is compatible with the ISO and ANSI Pascal standards.

Professional Host Tool Kit Pascal is a true optimizing compiler. The software, which runs on a host VAX/VMS, RSX-11M, or RSX-11M-PLUS system, generates PDP-11 instructions for eventual execution on a target Professional 300 Series system. The compiler runs in the Tool Kit environment. The generated code has full access to the graphics library, menu services, and communications services.

Refer to SPD #30.30.xx when requesting further information on this product from your local DIGITAL sales office.

A version of this product is available for the PDP-11 computer.

Price: \$780 - \$1200

Contact: Consult your local DIGITAL sales office (see Introduction).

Q'NIAL (Nested Interactive Array Language)**Operating System:** ULTRIX-32, UNIX* (Berkeley), VMS**Keywords:** • Data conversion • Interpreters • Mathematics
• Programming tools

Q'NIAL, an interactive interpreter for the Nested Interactive Array Language developed at Queen's University at Kingston, Ontario, is written in C and runs under UNIX* or VMS.

Data constructs in Q'NIAL are in the form of nested arrays. Q'NIAL handles seven types of data — Boolean, integer, real, complex, character, phrase, and fault. Data displayed on the screen is set off with boxes to show the structure of the arrays.

Q'NIAL has many predefined operations for arithmetic and numerical computation, but it also includes operations for ordering, sorting, measuring, selecting, inserting, building, permuting, and converting data. Q'NIAL handles numeric and literal or symbolic data with equal facility. A unique construct, called the Transformer, modifies the effect or range of an operation much like an operation modifies data.

Q'NIAL has an open design; it uses the system facilities for editing, file access, and command language and is delivered with a library of sample programs and an on-line help facility.

Q'NIAL can be used in many areas of computing — prototyping data systems, scratch-pad scientific or experimental computing, graphics, teaching computer science, VLSI design layout, and logic programming.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: \$1995 — \$6995**Contact:** Bill Jenkins

(613) 549-1432 or (800) 267-0660

N.I.A.L. SYSTEMS LTD.

P.O. Box 280

Alexandria Bay, NY 13607-280

RAID (Realtime Application Interactive Debugger)**Operating System:** VMS**Keywords:** • Debugging • Real time

This interactive debugger simplifies the task of debugging and maintaining support software. Hosted on a VAX-11, DECsystem-10, DEC-SYSTEM-20, IBM 370 (or equivalent), and a Tektronix 8561, RAID is targeted for the MIL-STD-1750A. RAID is compatible with PSS's JOVIAL compiler and the DUAL assembler/link editor.

RAID's major features include conditional breakpoints and conditional watchpoints on a statement/instruction basis, the ability to examine/modify HOL variables in native declaration mode, subroutine walkbacks and statement/instruction histories, conditional traces with user-selectable displays, user-definable debug procedures, and execution through simulator or hardware.

Price: \$45,000 – \$100,000

Contact: Joel Fleiss
(213) 394-5233

PROPRIETARY SOFTWARE SYSTEMS, INC.
429 Santa Monica Boulevard, Suite 430
Santa Monica, CA 90401

ReadCOBOL™

Operating System: ULTRIX-32, VMS

Keywords: • Data dictionary • Language enhancers
• Pre- and postprocessors

This COBOL preprocessor refurbishes your COBOL source programs, automatically structuring and formatting COBOL statements while sequencing paragraph and section names. ReadCOBOL semiautomatically renames data and paragraph items, as specified by a programmer or data administrator.

ReadCOBOL features a simplified data dictionary with printed directories; COBOL statement formatting and alignment customized to your installation's standards; automatic, optional paragraph name and section name sequencing; an interactive on-screen presentation of each data and paragraph name for a 1-time replacement with a more descriptive or standardized name; and automatic, optional level number standardization.

The Foundation promises to users of ReadCOBOL these benefits: a new level of formatting standardization for all your COBOL code — achieved automatically; a new level of readability and maintainability for your COBOL programs, regardless of who wrote them or how many times they have been changed; the elimination of the time and drudgery spent by your programmers in following shop standards in their coding — all formatting and paragraph sequencing can be done automatically using ReadCOBOL; and the ability to automatically bring all your COBOL programs up to standard whenever your standards are updated. About one programmer hour is required to learn ReadCOBOL.

The permanent license for ReadCOBOL includes the source code. User references are available upon request.

A version of this product is available for the PDP-11 computer.

Price: \$11,250

Contact: J. Dwight Minkler II, Executive Director
(602) 955-1148

FOUNDATION FOR SOFTWARE ENGINEERING
4339 North 39th Street
Phoenix, AZ 85018

Relocatable Macro Assemblers and Linking Loaders for Microprocessors

Operating System: ULTRIX-32, VMS

Keywords: • Assemblers • Microprocessor development
• Pre- and postprocessors • Programming tools

Relocatable Macro Assemblers and Linking Loaders are written in ANSI standard FORTRAN IV for a wide range of microprocessors, including the 8051, 8080/8085, 8086/87/88/186/188, 8096, 8048 family, 68000, 6809, 6805, 6800/01/02/03/04, Z8, Z80, Z8002, 1802/1804, 6500 family, and TI9900 series. The assemblers provide symbolic addressing, constant generation, and most features found in typical assembly languages. The directives and instruction mnemonics are identical to those used by the manufacturer's literature and software products. Additional directives have been implemented for versatile listing and output controls.

All assemblers provide macroassembly capability as well as conditional assembly. The user may nest both of those features. Each assembler can also print a cross-reference table from the assembler; a separate program is not required.

The relocatable output of the assembler provides features not found in other assemblers. Separate modules may be linked by public and external symbols. Some assemblers provide for a COMMON area. The user may specify the program, data, stack, and, for some assemblers, the base page areas of a program. Thus, the assembler provides for a RAM/ROM system. Eight-bit bytes as well as 16-bit addresses may be relocated by special operators. In addition, external symbols may be used in expressions.

The Linking Loader allows several independently assembled, relocatable object modules to be combined into a single absolute program. Thus, large programs can be subdivided into smaller units, which reduces assembly time and allows program errors to be corrected efficiently. The user may specify the starting address of any program segment as well as the order of the segments. External symbols may be specified by the user at load time.

The output listing of the Linking Loader includes a load map listing each object module and its starting address, as well as any undefined externals along with the object module in which it is used.

A version of this product is available for the PDP-11 computer.

Price: \$1800 – \$2500

Contact: Peggy Hall
(408) 733-2919

MICROTEC RESEARCH, INC.
505 W. Olive, Suite 325, P.O. Box 60337
Sunnyvale, CA 94088

RPG II

Operating System: MicroVMS, VMS

Keywords: • Compilers • Language enhancers • Report writer
• Text management

Distribution media: 9-track 1600 bpi magnetic tape, RX01, RX50, TU58 DECtape II cartridge.

VAX RPG II, an extended implementation of the RPG II language developed by IBM as a problem-oriented language for commercial applications, includes DIGITAL extensions for integration with the VAX/VMS architecture. This language processor provides a convenient means of preparing reports and other commercial data processing applications. VAX RPG II consists of a compiler, an editor, and Run-Time Library (RTL) support.

As a native-mode VAX/VMS language, VAX RPG II is integrated into the VAX/VMS common language environment. VAX RPG II programs can invoke, as functions, modules written in other VAX/VMS languages as well as many RTL routines and VAX/VMS or MicroVMS system services and utilities. VAX RPG II uses VAX-11 Record Management Services (RMS) for its file support. Thus, files created by VAX RPG II can be processed by other VAX/VMS languages and vice versa. VAX RPG II programs may be debugged with the VAX Symbolic Debugger.

The VAX RPG II compiler produces an object module from a source program linked into an executable image using the VAX linker. The compiler optionally produces a source listing with embedded diagnostics indicating the line and column of a source code error, a machine language listing, and a cross-reference listing.

The VAX RPG II editor is a full-screen interactive keypad editor that is tailored toward RPG program development and modification. The editor screen is divided into two parts. The bottom part contains RPG source code of the file being edited. The top part can also contain RPG source code or, if requested, a variety of help information, including a layout of the type of RPG specification being edited or a diagram of the keypad. A ruler of column numbers is provided on the screen to help users locate where fields should be entered.

Refer to SPD #26.05.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$315 – \$4725

Contact: Consult your local DIGITAL sales office (see Introduction).

RTL/2 (Real-Time Language)

Operating System: VMS

Keywords: • Assemblers • Compilers • Programming tools
• Source code control

Distribution medium: 800/1600 bpi magnetic tape.

This high-level, structured, ALGOL-based Pascal-like language is designed for use in real-time computing and is especially suited for the programming of on-line data collection, real-time monitoring, and control. RTL/2 is strongly typed and supports modularity, reentrancy, recursion, multitasking, and assembly language code inserts. RTL/2 is used worldwide at more than 500 installations. The language is British Standard BS5904. The system has no subsets or supersets to affect transportability between different vendor computers. A source code-level Symbolic Debug Package comes with the compiler.

A version of this product is available for the PDP-11 computer.

Price: \$3000

Contact: Robert F. Swanson
(201) 865-6550

INTELLIGENT INDUSTRIAL SYSTEMS, INC.
300 Harmon Meadow Boulevard
Secaucus, NJ 07094

The Safe C Compiler™

Operating System: ULTRIX-32, VMS

Keywords: • Compilers • Cross-compilers • Debugging

The Safe C Compiler, sc, is a checkout compiler for the C language. The language understood by the Safe C Compiler is identical to that understood by the standard C compilers.

The sc differs from ordinary compilers in the run-time checking, tracing, and profiling it provides for C programs. Code generated by the Safe C Compiler checks for:

- Misuse of functions: sc detects mismatched formal and actual parameters and checks the types and number of parameters.
- Array indexing out of bounds: sc checks for errant array indexes, including indexes in parameter arrays and in the argument list to main.
- Stray pointers: sc checks for data pointers that point outside of a program's data area and for function pointers that point outside the text area.
- Arithmetic errors: sc checks for arithmetic overflow and division by 0.
- Misuse of standard I/O: sc checks the validity, types, and number of arguments to routines in the standard I/O library. In addition, sc compares the control string in calls to the formatted input and output routines to the actual arguments passed and checks arguments for valid values.

- Misuse of string functions: sc checks the types and values of arguments to the copy, catenate, and length functions for strings.

In addition, the Safe C Compiler can produce code to generate a dynamic trace of function calls with their arguments and return values. In the trace, arguments and return values are labeled and printed in a format suitable to their type.

Each of the run-time checks and tracings can be applied selectively for each source file and can be controlled at run time from within the program. Code generated by the Safe C Compiler can be freely linked with object modules generated by other compilers and assemblers.

A version of this product is available for the PDP-11 computer.

Price: \$1000 - \$5000

Contact: Donald D. French
(617) 497-2160

CATALYTIX CORP.

55 Wheeler Street
Cambridge, MA 02138

Safe C™ Interpreter

Operating System: MicroVMS, ULTRIX-32, ULTRIX-32m, VMS

Keywords: • Debugging • Interpreters • Language enhancers
• Programming tools

Memory required: 128K. **Distribution media:** 9-track magnetic tape, cassette, diskette.

This easy-to-use interpreter, written in C, provides interactive execution of C programs, which can be executed under fine control of the programmer. Parts of the program can be modified and immediately reflected in the program's execution.

Once the modules are loaded into the interpreter, any function can be executed interactively, including the program entry point, using standard command-line syntax. During execution, the program can be monitored by setting breakpoints right into the source code so that they can depend on any collection of conditions; by tracing program execution at every expression, statement, or function call; by examining and changing the values of any active variables, using C syntax; by invoking extensive run-time checking similar to that of the Safe C compiler; and by invoking arbitrary code after the execution of each expression or statement, such as code to check or display the values of particular variables.

The Safe C Interpreter speeds program development, takes compiling and linking out of the development cycle (you just edit and run), makes debugging easy, and has all the power of the best source-level debuggers without the clumsiness of their operation.

A version of this product is available for the PDP-11 computer.

Price: \$600 – \$6000

Contact: Donald D. French
(617) 497-2160
CATALYTIX CORP.
55 Wheeler Street
Cambridge, MA 02138

SAL Low-Cost Cross-Assemblers

Operating System: VMS

Keywords: • Assemblers • Development tools

This series of cross-assemblers runs under RSX-11M (V3.1 or later) and RT-11 (V3 or later). The source and object files are in the manufacturer's standard format, and alternative object code formats are available for the Tektronix 8001 development laboratory and PROM programmers. The cross-assemblers are written in PDP-11 assembly language for optimum speed, between 1000 and 3000 lines/minute (1500 to 4500 lines/minute, including comments), and for optimum use of system interface facilities. The command line structure is similar to that of any DIGITAL system utility familiar to users.

Supported devices include Intel 8080/8085, 8048 (8041, 8021, and 8022 optional extras), and 8051; Motorola 6800/01/03/08, 6805, and 6809; RCA 1802/04/05/06; Zilog Z80; National NSC800; National Semiconductor SC/MP; Mostek 6502; and Texas 9900/99000.

A version of this product is available for the PDP-11 computer.

Price: £500 – £750

Contact: Eric Goodyer
(01) 467-2636
SIRA LTD.
South Hill
Chislehurst, Kent BR7 5EH
England

Series 32000 C Cross-Compiler

Operating System: UNIX* (Berkeley), VMS

Keywords: • Assemblers • Cross-compilers
• Programming tools • Source code control

This cross-compiler provides a complete software development package for C programs targeted for the Series 32000 microprocessor. Available for most popular multiuser development systems, the cross-compiler provides for down-loading programs to the DB32000 development board. The cross-compiler implements the complete C language as defined by Kernighan and Ritchie.

Taking full advantage of the capability of the 32016's machine architecture, the cross-compiler makes use of up to six 32-bit machine registers for the C language's "register" declaration. Floating-point support is provided in conjunction with the NS32081 floating-point unit.

The cross-compiler package is comprised of both a native code generator for the host development machine and a code generator for the Series 32000. Also included is a cross-assembler that optionally produces complete assembly listings with addresses, object code, and assembler source code. Additional programming utilities, including a linker and a librarian, are provided. A comprehensive portable C library with formatted I/O and string-handling routines is provided for both the host development machine and the 32016.

Full documentation is supplied. The *C Programmer's Manual* includes a description of the C language, the system-independent Portable Runtime Library, and the machine-level interface requirements. The *C Interface Manual* describes programming utilities and operating system interfaces.

The cross-compiler is based on the family of C compilers from Whitesmiths, Ltd.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$2500

Contact: Deborah A. Fullam, Technical Support
(215) 628-0846

JMI SOFTWARE CONSULTANTS

P.O. Box 481

Spring House, PA 19477

Series IV System

Operating System: VMS

Keywords: • Data base management • Data entry
• Networking • Programming tools

Distribution medium: magnetic tape.

This application implementation system offers 80% to 90% reduction in development and maintenance over conventional high-level languages. The system is designed for local and remote development and implementation of screen-oriented applications, interactive and batch processing, multiprogramming, and networking. Up to 32 terminals can be used on the same or mixed applications simultaneously. The system permits dynamic attach/detach of terminals. The system provides development for multiterminal and multiscreen use that may be performed on a single terminal and multiterminals called automatically at run time. The system features uses from data entry validation and display to transaction processing, including dynamic files update of its own files, other files, or data base systems. A translation feature for any language use — for example, German, French, Japanese, Arabic, and so on — is available. Security features are also provided. Various terminals and video options are available.

A version of this product is available for the PDP-11 computer.

Price: \$8000 – \$22,000

Contact: J. Milton, President
022 61 78 21 or 022 61 78 22
SOSY S. A.
5, rue Cesar-Soulie
1260 Nyon
Geneva
Switzerland

SIBOL (Software Ireland Business Oriented Language)

Operating System: UNIX* (Berkeley), VMS

Keywords: • Compilers • Debugging • Interpreters
• Software utilities

SIBOL is a commercial DIBOL-compatible programming language for the UNIX* operating system. Written in C, SIBOL comprises a compiler, run-time interpreter, symbolic debugger, and library of external utility subroutines. SIBOL can be used as a free-standing language or to convert existing DIBOL programs.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: F. S. Graham
(44) 232 247433
SOFTWARE IRELAND LTD.
26 Linenhall Street
Belfast BT2 8PJ
Northern Ireland

SMC BASIC

Operating System: VMS

Keywords: • Interpreters • Language enhancers
• Programming tools

This business-oriented interpreter runs under RSTS/E Version 7.1 or later, RSX-11M Version 4.0 or later, RSX-11M-PLUS Version 2.0 or later, VAX/VMS Version 3.3 or later, and P/OS. SMC BASIC is compatible with BASIC FOUR BUSINESS BASIC IV at the source level.

SMC BASIC uses RMS, including keyed (index) files, with some limitations. Extensive screen-handling functions are built in as mnemonics for use in INPUT or PRINT directives. Extensive input verification is embedded in the INPUT directive. Program chaining or overlays do not reinitialize data areas unless specifically requested. Thus, all data can be left in common. Commonly used programs or subroutines may be written as "public programs" and executed in line by the CALL directive. Files and records may be locked. SMC BASIC uses 14-digit precision for decimal arithmetic and floating-point mode for numbers over 14 digits, with automatic rounding to current precision setting, on

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assignment or output. Programs can be self-modifying. The EXECUTE, MERGE, DELETE, and EDIT directives can be used in line to write program generators.

SMC BASIC features automatic code conversion — EBCDIC to ASCII, for example — on input or output, by use of the TABLE option. Numeric type conversion is automatic. The programmer uses only numeric or string variables, and the system changes numeric types when needed.

A version of this product is available for the PDP-11 computer.

Price: \$795 — \$4800

Contact: Adrienne Webb, Sales Manager
(415) 798-0240

COMPUTER SYSTEMS DEVELOPMENT, INC.
300 Ellinwood Way, Suite 160
Pleasant Hill, CA 94523

SOFTBOL

Operating System: MicroVMS, VMS

Keywords: • Compilers • Cross-compilers

This DIBOL-83-compatible compiler and run-time system allows CTS-300 DIBOL software to be run under VMS. CTS-300-compatible utilities, such as ISAM and SORT, are included to cross-compile to CP/M86, MS-DOS, PC-DOS, XENIX, and UNIX* environments. Because the file structure is identical to CTS-300 installations, no file conversion is necessary. The performance of all software run under SOFTBOL is comparable to that of DIBOL under VMS.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$2800

Contact: Glenn Eastman
(617) 851-6245

OMTOOL CORP.
1445 Main Street, Suite 26, P.O. Box 477
Tewksbury, MA 01876

SpeedCOBOL™

Operating System: ULTRIX-32, VMS

Keywords: • Data dictionary • Language enhancers
• Pre- and postprocessors

SpeedCOBOL, a COBOL preprocessor, expands abbreviations into COBOL reserved words and phrases, data names and paragraph names, condition names, file names, and any other string you wish to abbreviate. SpeedCOBOL features a simplified data dictionary with printed directories, both shop and programmer-defined abbreviations,

a parallel listing showing abbreviated code alongside the expanded full COBOL code, and a statistics page documenting the savings in coding time for each program.

The Foundation promises to users of SpeedCOBOL these benefits: 40% to 50% savings in COBOL coding time, more descriptive data names and paragraph names used in programs coded using SpeedCOBOL, and the reduction or elimination of COBOL coding and keying drudgery. A self-learning procedure for SpeedCOBOL requires about one programmer hour.

The permanent license for SpeedCOBOL includes the source code. User references are available upon request.

A version of this product is available for the PDP-11 computer.

Price: \$3750

Contact: J. Dwight Minkler II, Executive Director
(602) 955-1148

FOUNDATION FOR SOFTWARE ENGINEERING
4339 North 39th Street
Phoenix, AZ 85018

Stage 2/VMS

Operating System: VMS

Keywords: • Pre- and postprocessors

Stage 2 is a general-purpose macro processor described in W. M. Waite's book *Implementing Software for Non-Numeric Applications*, Prentice-Hall, 1973. This program is written in Pascal and runs under VAX/VMS.

Price: Available upon request

Contact: Professor S. Congiu
(039) 49-657844

ISTITUTO DI ELETTRONICA
Via Gradenigo 6
35100 Padova
Italy

SUPERMAX

Operating System: UNIX* (System III), VMS

Keywords: • Assemblers • Compilers
• Microprocessor development

This family of cross-assemblers serves the following target processors: 6301, 6502, 6800, 6805, 6809, 68000, 7500, 7800, 7809, 7810, 8048, 8051, 8080/5, 8086/88, 9900, TMS7000, FAIRCHILD F8/3870, Z80, Z8000, and HITACHI Series 40. The cross-assemblers range from low-cost absolute assemblers to relocatable structured macro assemblers. Some versions also accept target manufacturers' source code format.

Other versions use a DIGITAL MACRO-11-like source syntax. Linking loaders and an object module librarian are included in the higher-level SUPERMAX packages at no additional cost.

SUPERMAX programs produce different load module formats, selectable at run time by switches in the linker or (absolute) assembler command string. Those formats include most of the manufacturers' standard formats.

Documentation and a 1-year limited warranty are provided.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$500 - \$1750

Contact: Mark P. White, Vice President, Marketing
(617) 938-0709
CYMRIC COMPUTER SYSTEMS, INC.
10 G Roessler Road
Woburn, MA 01801

T: A Dialect of Lisp

Operating System: VMS

Keywords: • Compilers • Language enhancers

This programming language is based on Scheme, a lexically scoped variant of Lisp. T centers on a small core language that is easy to learn. T provides components that compose well and a simple standardized mechanism for defining generic operations. T is a portable language requiring no special-purpose hardware.

T distribution consists of a magnetic tape and printed documentation that includes the executables for the system and compiler, a user's manual, a student manual, installation guides, and sources.

Price: \$900

Contact: Linda P. Chandler
(203) 436-3028
YALE UNIVERSITY
Office of Cooperative Research, P.O. Box 6666
New Haven, CT 06511

Tartan C

Operating System: ULTRIX-32

Keywords: • Compilers • Diagnostics • Graphics • Scientific

Tartan offers highly optimizing C and Modula-2 compilers for VAX and NS16000 systems running 4.2 BSD UNIX*. The output can be linked with code from other Tartan compilers. Tartan C provides optional array bounds check at run time, portability warnings, standard C libraries, and compatibility with the portable C compiler. Modula-2 provides separate compilation capabilities, low-level facilities to access machine-level operations, and strict type checking.

Both C and Modula-2 provide optimized code, superior compile-time diagnostics, and compatibility with other Tartan compilers. The package includes an installation guide, a user's guide, and a product support guide. Tartan C includes the new *C: A Reference Manual* by Harbison and Steele. Tartan Modula-2 includes Wirth's *Programming and Modula-2* language reference.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: \$1000 – \$2000

Contact: Maria Markwell
(412) 621-2210

TARTAN LABORATORIES INC.
477 Melwood Avenue
Pittsburgh, PA 15213

Tartan Modula-2

Operating System: ULTRIX-32

Keywords: • Compilers • Diagnostics • Graphics • Scientific

Tartan offers highly optimizing C and Modula-2 compilers for VAX and NS16000 systems running 4.2 BSD UNIX*. The output can be linked with code from other Tartan compilers. Tartan C provides optional array bounds check at run time, portability warnings, standard C libraries, and compatibility with the portable C compiler. Modula-2 provides separate compilation capabilities, low-level facilities to access machine-level operations, and strict type checking.

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* UNIX is a trademark of AT&T Bell Laboratories.

Price: \$1000 – \$2000

Contact: Maria Markwell
(412) 621-2210

TARTAN LABORATORIES INC.
477 Melwood Avenue
Pittsburgh, PA 15213

TBASIC

Operating System: VMS

Keywords: • CAD/CAM • Graphics • Interpreters
• Scientific

This BASIC interpreter is the most complete set of high-level graphics and GPIB instrument control extensions of any portable BASIC. Based on a superset of Tektronix 4050A BASIC, TBASIC is compatible with existing Tektronix software and offers new users a base of application

software for CAD, instrument control, and other graphics-related applications. The graphics extensions take advantage of the new high-performance color and black-and-white raster terminals available from Tektronix and other manufacturers.

TBASIC was developed in C for portability to micros and mainframes running standard operating systems such as UNIX*, CP/M, MS-DOS, and VMS. TBASIC runs an intermediate code structure that preserves the interactivity of BASIC while offering faster execution speeds and better overall performance.

The language includes high-level graphics commands, GPIB control statements, random and sequential file-access commands, 31-character variable names, complete error trapping, debug and trace facilities, line labels, formatted input and output from strings and files, integer and double-precision floating-point data types, device-independent I/O, extended string handling, Boolean and logical operators, and input prompts.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: \$795 – \$2000

Contact: Ralph Wilson

(801) 224-6550

TRANSERA CORP.

3707 North Canyon Road

Provo, UT 84604

TeleSoft-ADK (TeleSoft-Ada Development Kit)

Operating System: VMS

Keywords: • Compilers • Cross-compilers

• Microprocessor development • Source code control

This kit, which includes the TeleSoft-Ada Compiler, develops and executes Ada programs. The package also includes the VAX Native Code Translator, Text I/O and Generic Direct and Sequential I/O packages, the Ada Run-Time System with system interface to UNIX* or VMS, a set of Ada demonstration and test programs, and complete system documentation. The compiler operates in three passes, generating fast, native VAX machine code. The files produced are ready for execution. Tools are also available for cross-compiling Ada programs for the MC68000 to be executed from ROM (not under UNIX* or VMS) under TeleSoft's Run-Time System. TeleSoft's Ada products and services are used by military as well as commercial systems and software developers for Ada applications.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: \$16,400

Contact: TeleSoft
(619) 457-2700

TELESOFT
10639 Roselle Street
San Diego, CA 92121

Thoroughbred IDOL

Operating System: VMS

Keywords: • Data base management • Forms management
• Microprocessor development • Programming tools

This data base management system brings the full power of larger system software to the 16-bit microcomputer. IDOL is a program development tool designed for both first-time and experienced users.

All the data you define in IDOL can be instantly retrieved as a hard-copy printout. You can design your own custom special-entry screens for data transactions and updates. You can retrieve data from more than one file when generating a report. A complete daily operator status report enables you to track operator activity. You have access to comprehensive disk storage and file information reports, as well as to any record in your system, through IDOL's inquiry function. You can easily define data, records, and files, using IDOL's complete data dictionary system. By using the Global Dictionary, you can define data once and then use that data in as many files as you choose. IDOL's File Dictionary provides up to 999 files for your use. You can design up to 99 user menus, using IDOL's Selector Dictionary. You can automatically edit and validate information entered into the system during data entry. You can assign value tests, range tests, and numeric tests to any data field you choose. You can produce reports with total, subtotals, sorts on any field, and logical retrieval of certain records or a range of records, using simple English-language prompts. All data files and user menus can be password protected. Audit trails for each operator of the system are provided.

A version of this product is available for the PDP-11 computer.

Price: \$795 - \$8000

Contact: Adrienne H. Webb, Sales Manager
(415) 798-0240

COMPUTER SYSTEMS DEVELOPMENT, INC.

300 Ellinwood Way, Suite 160

Pleasant Hill, CA 94523

Turing Language Compiler

Operating System: UNIX* (Berkeley)

Keywords: • Compilers • Diagnostics
• Microprocessor development

Turing is a general-purpose programming language that is well suited for teaching programming. Designed to support the development of reliable, efficient programs, Turing incorporates language features that decrease the cost of program maintenance and that support formal verification.

Turing is designed to be supported by a user-friendly compiler and run-time system of modest size; those should insulate the user from vagaries of the underlying hardware and operating system. Turing is a Pascal-like language and incorporates almost all of Pascal's features. However, Turing alleviates many difficulties with Pascal by providing convenient string handling, modules, type safe variant records (unions), and dynamic parameters and arrays.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: \$1500 – \$11,000

Contact: E. Ann Struthers
(416) 978-6985

COMPUTER SYSTEMS RESEARCH INSTITUTE
University of Toronto
10 King's College Road
Toronto, Ontario M5S 1A4
Canada

UNIFORTH

Operating System: MicroVMS, VMS

Keywords: • Assemblers • Compilers • Debugging
• Device drivers/handlers

Memory required: 24K bytes. Distribution media: RX01, RX50.

This version of the FORTH programming language complies with the FORTH-83 standard with all its extensions. Available for RT-11, RSX-11M, and VMS-11 systems, as well as the Rainbow, UNIFORTH provides a complete programming environment with full macro assembler, video editor, interpreter, compiler, debugger, and floating-point arithmetic. Full operating system support includes a built-in driver interface for magnetic tape, diskettes, VT105 graphics, line printers, file system, and system requests. The Pro350 version includes a high-resolution graphics package and XK communications support. All versions provide memory management and task-extension capability. Options include cross-compilers, a programmer's manual, terminal communications plotting packages, and more.

A version of this product is available for the PDP-11 computer.

Price: \$295 – \$895

Contact: Arne A. Henden
(301) 552-9590

UNIFIED SOFTWARE SYSTEMS
P.O. Box 2644
New Carrollton, MD 20784

Vandata Z80 C Cross-Compiler

Operating System: UNIX* (Berkeley), VMS

Keywords: • Compilers • Microprocessor development
• Programming tools

A full implementation of the C language targeted for the Z80 microprocessor, the compiler can be run on PDP-11, VAX, Z8000, and 68K hosts, as well as on CP/M™ systems. Based on the Whitesmiths compiler, Vandata C offers thorough support for ROM/RAM environments, extremely compact generated code, and the ability to intermix assembly language routines with C routines. An optimizer, Z80 assembler, linker, librarian, and other tools are provided with the compiler, as well as the facility to interface to other cross-compilers. A royalty-free run-time library is available.

* UNIX is a trademark of AT&T Bell Laboratories. CP/M™ is a trademark of Digital Research Inc.

A version of this product is available for the PDP-11 computer.

Price: \$3000

Contact: Dwight VandenBerghe
(206) 542-7611
VANDATA
17541 Stone Avenue North
Seattle, WA 98133

VAX Ada®

Operating System: MicroVMS, VMS

Keywords: • Compilers • Debugging • Programming tools
• Real time

Distribution media: 9-track 1600 bpi magnetic tape, RA60, RK07, RL02, RX50.

VAX Ada is DIGITAL's government-validated implementation of the full ANSI-MIL-STD-1815-A-1983 Ada language. The VAX Ada compiler runs under the VAX/VMS and MicroVMS operating systems and generates optimized, shareable, and position-independent code.

As a native-mode VAX/VMS language, VAX Ada is integrated into the VAX/VMS common language environment. Full symbolic debugging and VAX/VMS system services and utilities are thus available to programs written in VAX Ada. VAX Ada supports VAX Record Management Services (RMS), including sequential, relative, and indexed file organizations and associated access methods. VAX Ada programs can invoke modules written in other VAX/VMS languages. Additionally, programs written in other languages can invoke VAX Ada modules.

VAX Ada is suitable for systems, computational, general, and, especially, real-time computing needs. In addition to being a suitable language for real-time applications, Ada gives the programmer features for multitasking one of its many powerful language features. VAX Ada

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is particularly ideal for large applications, such as major systems implementations, in environments in which development and maintenance costs are of great concern.

Refer to SPD #26.60.xx when requesting further information on this product from your local DIGITAL sales office.

Ada® is a registered trademark of the U.S. government (Ada Joint Program Office).

Price: \$4980 – \$37,350

Contact: Consult your local DIGITAL sales office (see Introduction).

WATCOM APL

Operating System: VMS

Keywords: • Development tools
• Interpreters • Programming tools

Distribution medium: 9-track 1600 bpi magnetic tape.

This interpreter, developed by WATCOM Systems Inc., maximizes program development productivity in an interactive time-sharing or personal computer environment. WATCOM APL serves education and business areas.

Extensions to the language were made without altering the fundamental syntax of the language. A native file system allows communication with the file system of the underlying machine, including the keyboard and the printer. A component file system allows arrays of any size and shape to be stored in a file. The user can perform random or sequential access to files of arrays. Powerful report-formatting facilities and full-screen editing are included. Blanks are retained in user-defined functions for ease of readability. Extensive string-handling capabilities are featured. Event trapping and simulation let the user control error conditions. A machine-level interface increases the versatility of WATCOM APL, which is written in Waterloo Systems Language.

Price: \$900 – \$3600

Contact: Jean Steffensen
(519) 886-3700

WATCOM PRODUCTS INC.
415 Phillip Street
Waterloo, Ontario N2L 3X2
Canada

WATCOM BASIC

Operating System: VMS

Keywords: • Development tools • Interpreters
• Programming tools

Distribution medium: 9-track 1600 bpi magnetic tape.

This interpreter, developed by WATCOM Systems Inc., maximizes program development in an interactive time-sharing or personal computer environment. WATCOM BASIC includes ANSI BASIC as defined in the 1978 X3.60 standard, as well as powerful extensions, including structured program control, which encourages programming in a logical manner. Variables and other program entities can have 31-character names. Parameters can be passed to both procedures and functions. Full-screen editing allows the user to modify program lines by using cursor control keys, character insert and delete, and other techniques.

Commonly needed built-in functions for both string and numeric computations are included. Error messages are user friendly and meaningful. The traditional interactive debugging facilities are extended with statement trace and single step. Terminal input and output recording is ideal for beginners. The student can create an output file suitable for marking.

Formatted input and output features include credit and debit, floating dollar, and asterisk fill, useful for producing financial reports.

Matrix functions include matrix multiplication and matrix inverse, useful for engineering and mathematical problems. WATCOM BASIC is written in Waterloo Systems Language.

Price: \$900 – \$3600

Contact: Jean Steffensen

(519) 886-3700

WATCOM PRODUCTS INC.

415 Phillip Street

Waterloo, Ontario N2L 3X2

Canada

WATCOM COBOL

Operating System: VMS

Keywords: • Development tools • Interpreters
• Programming tools

Distribution medium: 9-track 1600 bpi magnetic tape.

This interpreter, developed by WATCOM Systems Inc., maximizes program development in an interactive time-sharing or personal computer environment. The system includes level 1 of the nucleus, sequential I/O, relative I/O, and table-handling modules. Parts of level 2 are also supported in the modules, including support for the PERFORM, STRING, and UNSTRING verbs.

A full-screen editor for preparing programs, a powerful interactive debugging facility, and undefined variable checking are included. A CALL statement is used for machine language routines. WATCOM COBOL is written in Waterloo Systems Language.

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Price: \$900 – \$3600

Contact: Jean Steffensen
(519) 886-3700

WATCOM PRODUCTS INC.
415 Phillip Street
Waterloo, Ontario N2L 3X2
Canada

WATCOM FORTRAN

Operating System: VMS

Keywords: • Development tools • Interpreters
• Programming tools

Distribution medium: 9-track 1600 bpi magnetic tape.

This interpreter, developed by WATCOM Systems Inc., maximizes program development in an interactive time-sharing or personal computer environment. The interpreter implements most of the FORTRAN-77 language standard. The design emphasizes user-friendly error diagnosis and powerful interactive debugging abilities. A collection of statements for structured programming have been added that are similar to the statements in the WATFOR-11 and WATFIV compilers.

WATCOM FORTRAN supports FORTRAN-77 statements except ASSIGN, BLOCK DATA SUBPROGRAM, ENDFILE, IMPLICIT, ENTRY, PARAMETER, DATA, Arithmetic Statement Functions, EQUIVALENCE, INTRINSIC, SAVE, BACKSPACE, INQUIRE, and Assigned GOTO. INTEGER, REAL, and CHARACTERS data types are supported. No provision exists for REAL*n, INTEGER*n, DOUBLE PRECISION, COMPLEX, and LOGICAL. However, LOGICAL operations are supported on INTEGER data.

A subset of the input/output capability includes sequential and direct input/output and most of the possible FORMAT specifications.

Program format is generalized. Statements can be entered without regard to columns in a line. Comment lines are recognized by an asterisk (*) in the first column. Continued lines are recognized by an ampersand (&) in the first position. Syntactic units may not be continued across lines. The length of variable names is limited only by the length of a line. Space characters in a line are significant delimiters. The language uses reserved words of names.

WATCOM FORTRAN is written in Waterloo Systems Language.

Price: \$900 – \$3600

Contact: Jean Steffensen
(519) 886-3700

WATCOM PRODUCTS INC.
415 Phillip Street
Waterloo, Ontario N2L 3X2
Canada

WATCOM Pascal**Operating System:** VMS**Keywords:** • Development tools • Interpreters
• Programming tools

Distribution medium: 9-track 1600 bpi magnetic tape.

This interpreter, developed by WATCOM Systems Inc., maximizes program development in an interactive time-sharing or personal computer environment. WATCOM Pascal corresponds to the ANSI Pascal Standard and to the ISO Pascal committee draft proposal. The interpreter provides easy manipulation of character strings, extended input/output for additional file manipulation, user-friendly error diagnosis, and powerful interactive debugging abilities. Those features are useful in both education and program development.

WATCOM Pascal string extension provides type compatibility for unequal-length strings, a mechanism for variable-length strings, a method for representing 1-character string constants or a null string, a library of string-manipulation routines, and a method of reading string input. I/O facilities include procedures such as reset and rewrite that allow control over file name specifications. The append procedure permits records to be added to the end of a file. Update opens a file for relative access; setnext sets the next record to be accessed. Lazy I/O allows terminal I/O to behave in an intuitive way for interactive programs.

Intrinsic procedures and functions permit a machine-level interface: peek, to examine memory; poke, to store into memory; sysfunc and sysproc, to call machine language routines; and address, to obtain the variable's machine address. The case statement is extended to permit the else part. Random-number generation uses the initrandom procedure and the random function.

WATCOM Pascal is written in Waterloo Systems Language (WSL).

Price: \$900 – \$3600**Contact:** Jean Steffensen
(519) 886-3700

WATCOM PRODUCTS INC.
415 Phillip Street
Waterloo, Ontario N2L 3X2
Canada

Waterloo Pascal Compiler**Operating System:** VMS**Keywords:** • Compilers • Debugging • Development tools
• Programming tools

Distribution medium: 9-track 1600 bpi magnetic tape.

This debugging-oriented, load-and-go compiler for multiuser time-sharing environments is written in Waterloo Systems Language and was developed by the Computer Systems Group at the University of Waterloo. The compiler features a complete implementation of ANSI/IEEE 770X3.97-1983 Standard Pascal, as well as several extensions to the language. The interactive debugger can be used to monitor program execution or to examine the program state after an execution-time error.

The run-time diagnostics detect such errors as attempts to use uninitialized variables, incorrect use of subrange values, array subscripting errors, attempts to use nil pointer values or previously disposed memory, variant record semantics, and control-statement semantics. Waterloo Pascal issues an error message stating the location of the error, the name of any variables involved in the error, and a procedure/function activation traceback with a display of the scalar and string variables at each level.

The compiler contains tailorable safeguards to prevent run-away programs. A listing file and a diagnostic file are produced.

The Waterloo Pascal string extension allows convenient manipulation of variable-length string data. The concurrent process extension permits the simulation of multiprocessing in Pascal. The extension uses a message-passing abstraction similar to that used in several real-time operating systems. The standard procedures reset and rewrite are extended, permitting system-dependent file names to be specified. Extensions to the character set accommodate systems with incomplete character sets. General-purpose standard functions and procedures, such as arcsin, arccos, arctan2, tan, RtoS, and StoR, have been added. The noninteractive debugging procedures TraceOn and TraceOff have been added as well.

Price: \$900 - \$3600

Contact: Jean Steffensen
(519) 886-3700

WATCOM PRODUCTS INC.
415 Phillip Street
Waterloo, Ontario N2L 3X2
Canada

XLISP: An Experimental Object-Oriented Language

Operating System: VMS

Keywords: • Language enhancers

Memory required: 64KB.

This experimental programming language combines some LISP features with an object-oriented extension capability. XLISP was implemented to allow experimentation with object-oriented programming on small computers. Implementations are running on the PDP-11 under RSX-11, RT-11, and UNIX* V7; on the VAX under VAX/VMS

and Berkeley VAX/UNIX*; and on the Z-80 under CP/M-80. Written in the C programming language, XLISP is easily extended with user-written built-in functions and classes. DECUS number 11-626.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$5 - \$225

Contact: DECUS (see Introduction)

York Ada Compiler

Operating System: ULTRIX-32, UNIX* (Berkeley), VMS

Keywords: • Compilers • Education • Real time

The York Ada compiler generates code for a large subset of Ada as defined in ANSI/MIL-STD 1815 A. The subset of Ada is large enough to be used for significant system programming tasks.

Release 1.1 of the compiler contains such features as separate compilation, tasking, exception handling, standard libraries, and run-time support. A comprehensive maintenance policy ensures that customers receive further releases, which will include such features as derived types and generics.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: £10,000 - £12,000

Contact: P. Grant

0252 544321

SOFTWARE SCIENCES LTD.

Abbey House, 282/292 Farnborough Road
Farnborough, Hampshire GU14 7NB
England

THE UNIVERSITY OF CHICAGO
 LIBRARY
 540 EAST 57TH STREET
 CHICAGO, ILL. 60637

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 CHICAGO, ILL. 60637

Law



Black Star Publishing Company/Fred Ward

bcsADMINSYSTEM®

Operating System: VMS

Keywords: • Accounting • Billing • General ledger
• Scheduling

This program handles fee schedule billing at both the client and file levels. Up to seven hourly rates can be set up for each file. For any file, timekeepers may charge special rates.

The program also has automatic cycle billing for each file (quarterly, annually, and so on) and minimum-dollar billing, which prompts the system to automatically include for billing all files with unbilled fees that exceed that dollar amount. The on-demand billing feature allows the automatic printing of bills for selected files or for all files of a selected file type, client, or billing attorney.

The software automatically processes rate changes for selected matters, clients, and timekeepers. The effective date of the change is entered to determine which entries are to be charged at the old and new rates, respectively.

The program also has unlimited billing narrative and more than 20 billing statement formats. A summary can be printed on each bill, including the names of each person on the bill, the total hours, and the hourly rate charged by each person. A reversal feature allows quick and easy corrections and the reprinting of bills. Statistics are automatically updated to reflect changes made to a bill. Each bill has three optional sections for a claim number, a policy number, the name of insured, date of loss, and so on.

The Client Adjuster report contains a client adjuster diary to track the contact dates, entertainment dollars spent, and the number of files received from each adjuster of a carrier. Comprehensive management and productivity reports with divisions by office and department can be generated. Along with billing statistics, the billing register indicates if a file was billed out of cycle and prints the total dollars that should have been billed for a file.

All client-related reports group the offices of multiple-office clients. The reports offer separate totals for each office of a client, as well as combined totals for all offices.

The software offers screen display of the most recent administrative and financial data for selected files, timekeepers, and clients. Calendar reports, including activities by office, timekeeper, and activity type (depositions, vacations, and so on), may be generated. Any date range can be chosen. The day (Monday, Tuesday, and so on) is printed along with the calendar date.

Price: \$10,000 – \$25,000

Contact: Richard Bosler, Partner
(213) 956-3214

BOSLER-CLINE SYSTEMS
741 South Street
Glendale, CA 91202

General Ledger

Operating System: VMS

Keywords: • Accounting • General ledger

This package enables law firms to computerize accounting books and records. The system provides all financial statements, such as trial-balance and comparative-balance sheets, general ledger, income and expense statements, and statements of partners' capital expenses.

The General Ledger package interfaces to the Management Program 1000/Management Program 2000 timekeeping and billing system. That integration between the two packages allows the general ledger to be easily maintained, with little duplication of effort.

A version of this product is available for the PDP-11 computer.

Price: \$5000

Contact: Suzanne Gunnells
(215) 825-7500

COMPUTE-R-SYSTEMS, INC.
5165 Campus Drive
Plymouth Meeting, PA 19462

Law Firm Management System

Operating System: VMS

Keywords: • Accounting • Billing • Cost accounting
• Information management

The Law Firm Management System is available as a complete stand-alone system or may be purchased through a software license. The system handles client matters, collection of time/disbursements for a matter, trust accounting, interim and final billing, individual time management, accounts receivable, cash flow/bank, and general ledger/financial statements. Complete documentation, training, installation, and support are included.

A version of this product is available for the PDP-11 computer.

Price: \$15,000 – \$30,000

Contact: George K. Fleming
(807) 623-2310

G. K. FLEMING AND ASSOCIATES LTD.
1118 Roland Street
Thunder Bay, Ontario P7B 5M4
Canada

Law Office Management System

Operating System: VMS

Keywords: • Accounting • Billing • Financial management
• Recruiting

This fully integrated accounting system provides client billing and expense accounting, accounts receivable, accounts payable, automatic checkwriter, general ledger, trust and fiduciary accounting, and personal account statements. Other DP applications for the law office include docket control, a search and retrieval system, fixed asset control, personnel leave, and associate recruiting.

A version of this product is available for the PDP-11 computer.

Price: \$5000 - \$25,000

Contact: Carolyn Burneston, Marketing Manager
(301) 652-2802

BEERS & ASSOCIATES, INC.
7910 Woodmont Avenue
Bethesda, MD 20814

Legal Management System

Operating System: VMS

Keywords: • Accounts payable • Accounts receivable • Billing

This system offers specialized legal time billing, accounts receivable, and management report programs designed for small and medium-size law firms. Features include unlimited timeslip narrative, multiple statement formats, trust and/or retainer modules, and an optional finance charge. This table-driven package is tailored to specific needs of firms. The PDP-11 system also tracks receipts by lawyer and area of practice, as well as the associated billings.

The system contains an annual enhancement program that responds to the changing requirements of firms and their clients. An outstanding training program for the administrator as well as the operator is offered along with the annual user meetings.

A version of this product is available for the PDP-11 computer.

Price: \$2500 - \$19,000

Contact: Marc Alexander, National Sales Manager
(503) 641-8100

ALPINE DATASYSTEMS, INC.
8043 SW Cirrus Drive
Beaverton, OR 97005

Legal Time and Accounting System

Operating System: VMS

Keywords: • Accounting • Cost accounting • Scheduling
• Word processing

This system, designed for a single or multigroup firm of lawyers, records and accumulates the lawyer's time on a case-by-case basis for billing and reporting purposes. Client billings, produced on a case-by-case basis, include lawyers' time and expenses. The user can input time from lawyers' time slips. The entry may include the lawyer, client, case, time involved, type case (probate, tax, and so forth), and free-text description of service rendered. Each lawyer's standard fee is built in but can be overridden on each entry. The system also includes complete word processing capability and accounting, including general ledger, accounts payable, and payroll.

Available reports are Current Month Billing, Accounts Receivable Aged Account, Billings in Suspense, Average Rate per Hour Billed versus Hours Incurred, and Billings by Case Type.

A version of this product is available for the PDP-11 computer.

Price: \$1500 - \$20,000

Contact: Marty Carpenter
(405) 843-7323

DATATEK CORP.

818 N.W. 63rd

Oklahoma City, OK 73116

Legal Time and Billing System

Operating System: VMS

Keywords: • Accounts receivable • Billing • Financial analysis
• Report writer

Distribution media: RK07, RL02.

This system applies reported time and expenses to appropriate client matters and monitors accounts receivable. The system provides comprehensive financial and management reports, including productivity analyses; revenue reports by attorney, client, and matter type; aged accounts receivable; and the value of unbilled time and unbilled advanced costs.

As many as five rates are stored for each attorney. Special rates can be applied for any client or matter.

The flexible billing process flags statements due by frequency, by threshold dollar amount, or by discretion. Bills can be generated by attorney, by client, or by matter. The system produces inquiry, edit, and final bills. The bill format can display as many as 1200 characters of explanatory notes for each time and expense entry. The system calculates tax for states that tax personal services.

Complete audit trails are created. In addition to the integral accounts receivable function, the system interfaces with other accounting modules, such as general ledger.

A version of this product is available for the PDP-11 computer.

Price: \$20,000

Contact: Ralph S. Trigg, Jr.
(505) 842-1247

AUTOMATED OFFICE SYSTEMS, INC.
P.O. Box 100
Albuquerque, NM 87103

LegisTrak

Operating System: VMS

Keywords: • Data base management • Information management
• Library science • Media

LegisTrak features access to legislation by subject, bill number, or sponsor.

Price: \$20,000 – \$45,000

Contact: Allen Paschal
(405) 843-7323

DATATEK CORP.
818 N. W. 63rd Street
Oklahoma City, OK 73116

LOFT (Law Office of the Future, Today)

Operating System: M (MUMPS), MicroVMS, VMS

Keywords: • Accounts payable • Accounts receivable
• Office systems • Payroll

The LOFT system provides time and disbursement recording, which permits unlimited narrative and a dictionary of abbreviations. The system allows various formats for final bills, with unlimited narrative, complete detail by entry, or paragraph format. Time/disbursement entries may be transferred from one client/case to another, with complete audit trails. Complete historic accounts receivable with all detail may be maintained, plus the system provides the ability to "unbill" bills, edit, and rebill, leaving an audit trail. The system also features integrated accounts/payable, client accounting, and general ledger, with automatic check writing and complete general ledger narrative; conflict-of-interest checking for maintaining a regular alpha look-up file, as well as a compacted alpha file, stripping out the vowels; a payroll system; and word processing — OEM for MASS-11 (MicroSystems Engineering).

A version of this product is available for the PDP-11 computer.

Price: \$2000 – \$35,000

Contact: Leon M. Padell
(617) 426-1040

LEGAL DATA SYSTEMS, INC.
50 Franklin Street
Boston, MA 02110

Management Program 2000

Operating System: VMS

Keywords: • Accounting • Billing • Information management
• Management

MP2000 is designed to establish new standards in speed, flexibility, and overall utility in financial, administrative, and practice-related tasks for law firms. Major benefits include choice of on-line or staged updating of data for convenient, easy-to-control entry of time and disbursements; communications with a variety of OCR, telephone, and copy control systems; graphics capability to produce reports in easy-to-digest charts and graphs; retention of management data on a monthly basis for up to five years; allocation of billing or receipt credits to all levels of attorneys; availability of integrated general ledger and accounts payable packages; a comprehensive billing function that allows the user to assign the bill value, prorate attorney allocation, and apply retainers, all on one screen; a wide range of reports, including management information by type of law, office, department, and levels of attorney; ease of operation, which encourages distribution of terminals throughout the firm; an easy-to-use editing routine to automatically amend and print final bills in user-designed formats; an expanded report-writing capability that allows the user to create tailored management reports, with access to all data files for unprecedented speed and convenience; transaction journaling for easy backup and recovery; an expanded capability for handling multiple-office and international accounting; convenient interface with personal computers; password protection at both the system and user levels; and availability of compatible word processing and document management systems.

Price: \$67,000 +

Contact: Suzanne Gunnells
(215) 825-7500

COMPUTE-R-SYSTEMS, INC.

5165 Campus Drive

Plymouth Meeting, PA 19462

PICALC: Lifetime Earnings Estimation

Operating System: VMS

Keywords: • Calculation aids • Financial analysis • Insurance

PICALC estimates the present value of an individual's lost lifetime earnings, for use in personal injury, wrongful death, and medical malpractice arbitration and litigation. Options include gross income and after-tax income estimates, single- and multiple-salary persons, retraining and alternative employment allowances, valuation of working and home-oriented housewife's services, allowances for personal-consumption expenditures, estimation of in-kind contributions, and federal civil service, seamen, longshoremen, and other "special cases."

The program uses age/sex life expectancy and work-life expectancy look-up tables to determine the time span of regular and retirement pay earnings losses. A subroutine estimates federal tax liability for single and married persons.

Inputs include injured party's dates of birth, injury, or death; expected trial date; preaccident income and fringe benefits; start-year retirement pay; proposed discount rate; and expected inflation rates. Outputs include present value and disbursement tables by year.

Customized special programs of this kind are available on three days' notice.

A version of this product is available for the PDP-11 computer.

Price: \$500 - \$800

Contact: David Bradwell, Ph.D., President
(415) 479-4980

DAVID BRADWELL AND ASSOCIATES, INC.
Economic Consultants
880 Las Gallinas Avenue
San Rafael, CA 94903

POMS (Professional Office Management System)

Operating System: VMS

Keywords: • Accounts receivable • Billing • Report writer
• Scheduling

Distribution media: 9-track 800/1600 bpi magnetic tape and most standard DIGITAL disk cartridges.

This series of programs for running a smooth, efficient office includes time entry/analysis, expense and disbursement reporting, work-in-process tracking, bill preparation, and more. POMS is available for fast, efficient, trouble-free installation. POMS is a turnkey system, which means hassle-free transfer from your current system to POMS.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: George B. Weaver
(612) 571-1249

CUSTOM DIGITAL SERVICES
999 50th Avenue Northeast
Minneapolis, MN 55421

Suspect-Identification System

Operating System: VMS

Keywords: • Data base management • Information management
• Statistics

This comprehensive interactive system matches suspects to crime clues. In addition to cross-references to photos and other files, records on each person include information about eyes, age, sex, race, height, scars, and other physical characteristics, as well as keys to a criminal record. The fingerprint table may include multiple print codes for one finger. In searching for a suspect on limited clues, the search key list may include connectors such as "AND," "MUST," "RANGE," and "NOT."

A version of this product is available for the PDP-11 computer.

Price: \$8000 +

Contact: Nathan I. Lieberman
(812) 479-6951

EVANSVILLE DATA PROCESSING CORP.
1010 S. Weinbach Avenue, P.O. Box 2469
Evansville, IN 47714

The first of these is the fact that the
the second is the fact that the
the third is the fact that the
the fourth is the fact that the
the fifth is the fact that the
the sixth is the fact that the
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Library Science



BASIS Technical Library

Operating System: VMS

Keywords: • Data base management • Information management

This turnkey approach automates the library functions of an organization's information center. Battelle provides support to tailor the turnkey package to meet the customer's requirements. End-user staff are trained to be self-sufficient, requiring little or no assistance from the computer center staff.

The features of the Technical Library include on-line catalog access by keywords to author, title, publisher, and subject through menu-driven or direct-search approach; circulation control driven on line through bar coding and light pens or through terminal input; book reservation and memo generation; acquisitions control showing purchase orders and current status; book processing done on line or off loaded from MARC tapes with formatting capabilities for either full or partial display; serial controls that merge multiple functions, such as check-in, claiming, routing, and ordering; and several security types and levels.

The BASIS Technical Library lets users define new applications and begin loading data within a few days. No computer programming is required for most implementations.

Price: \$12,000 +

Contact: BASIS Coordinator
(800) 328-2648

BATTELLE SOFTWARE PRODUCTS CENTER
505 King Avenue
Columbus, OH 43201-2693

Bibliography System

Operating System: VMS

Keywords: • Data base management • Information management
• Research

Memory required: 290 pages working set.

This program uses the index-sequential capabilities of VAX-11 BASIC to set up a cross-reference system for books, periodicals, and so on. One application for use is to store in a particular field the information on all books that are owned by departmental faculty as well as a university's library. Inquiries can then be made by subject, author, reference, or title. DECUS number VAX-85.

Price: \$5 - \$225

Contact: DECUS (see Introduction)

BiblioTech Library Software Systems

Operating System: VMS

Keywords: • Data base management • Forms management
• Information management • Report writer

These modules for the company library or information center support the management, clerical, and intellectual efforts of a vital research library. Basic BiblioTech consists of three modules: catalog update, authority update, and a browsing module that serves as an on-line catalog. Additional modules are Circulation, Periodicals Control, and Rapid Data Entry for converting card files.

BiblioTech is based on DRS (Data Retrieval System) and is delivered on 9-track magnetic tape with DRS. Librarians use DRS, a mature and reliable data base management system, with BiblioTech for information retrieval and management. The library data base can be updated interactively or in batch mode.

Most BiblioTech modules can be used alone or in conjunction with other modules. The modules interact, using a single data base. Data entered in any one of the modules updates the files and data in the other modules. The full set of modules eliminates the redundancy in capturing and storing information needed for acquisition, storage, or retrieval operations.

The BiblioTech system allows the user to enter bibliographic information when material is being ordered. The system prints order forms. Items on order are automatically available for searching, with the status displayed in the Browsing module. The system tracks department charges, cost of material, and the person requesting the material. BiblioTech Browsing works through menu options; the user scans indexes, eliminating the need for a card catalog.

BiblioTech provides support for the on-line catalog, quality indexing and abstracting for better retrieval, more timely indexes and catalogs, better current awareness services, a better-managed collection, and full Boolean search capabilities to information resources and to fields of data in the data base. For the technical or company library with diverse and unique information resources that need to be in a single data base, this system provides a simple and cost-effective solution.

A version of this product is available for the PDP-11 computer.

Price: \$15,000 - \$21,000

Contact: Lynda W. Moulton
(617) 897-7163

COMSTOW INFORMATION SERVICES

302 Boxboro Road
Stow, MA 01775

Grom Hayes Library Automation Systems

Operating System: VMS

Keywords: • Data base management • Inventory

Memory required: 60,000 blocks. Distribution medium: magnetic tape.

The Grom Hayes Library Automation Systems include 60 programs, written in VAX-11 BASIC, that catalog material, control inventory, and maintain circulation records. Cataloging may be by printed cards (CATCAR-CARDS), printout (SIMCAT-CATLOG), or on line (SIMCAT-SEARCH). Circulation control includes automated overdue notices and reminder notices and has a daily report program. Inventory includes library equipment, AV equipment and software, books, magazines, and pamphlets.

Price: No charge

Contact: Dr. Larry W. Yother
(203) 527-4111

HARTFORD STATE TECHNICAL COLLEGE
401 Flatbush Avenue
Hartford, CT 06106

Medianet

Operating System: VMS

Keywords: • Inventory • Networking • Scheduling

Distribution medium: 9-track magnetic tape.

This media management/distribution system for individual and inter-linked libraries performs resource booking, pick lists and shipping labels, reports, intranetwork communications, and client notices and messages functions. The system features on-line interactive reservations, updates, and information displays; optimized machine usage by user-controlled deferred batch processing of reports and notices; a direct computer-to-typesetter catalog option; a comprehensive electronic mail communication system; and table-driven shipping modes, holidays, transit delays, and so on.

Medianet's powerful report writer enables the user to customize standard reports by choosing sorts, page, paragraph and total breaks, print variables, and record selection.

A version of this product is available for the PDP-11 computer.

Price: \$20,000

Contact: Robert Brown
(902) 429-3175

DYMAXION RESEARCH LTD.
Box 1053, Armdale Station
Halifax, Nova Scotia B3L 4L5
Canada

REF-11™

Operating System: VMS

Keywords: • Data base management • Research
• Text management

Distribution medium: RX01.

REF-11 is an easy-to-use, menu-driven data base management system for references, which can be created, searched, updated, and output in various forms. The data base of references may be distributed among any number of references volumes (data files). Variable-length direct-access records are used within a reference volume to store the reference information. That format is as fast as fixed-length direct-access storage and uses less space than a text file would to store the same information.

REF-11 uses full-screen data entry to create new references or to update existing ones. The user uses the cursor keys to move between data fields. If the terminal does not have cursor keys, any character sequences can be defined as cursor keys.

References can be located within a reference volume by searching for any combination of authors, years of publication, reference title (or any words in the title), and topics covered by the reference. Wildcards may be included in any of the search parameters. In addition, a reference may be located by a unique ID number assigned by the REF-11 system when the reference is created.

REF-11 can produce many different listings of the references in a reference volume and can send them to any device or file on the computer system. The references included in the listing may be all of the references in a volume, just user-specified ID numbers, or just the references that meet search parameters. Optionally, the references can be alphabetized in the listing.

A unique feature of REF-11 is the formatted bibliographic listing. The page size, line spacing, punctuation, and format of the bibliography are controlled by the user. References can be alphabetized. Journal titles can be abbreviated from user-defined tables.

An optional utility program can read a paper, insert reference citations in the paper, and prepare a bibliography of the references cited. The bibliography may be included at the end of the paper. Another utility program can read references from text files and store them in REF-11 reference volumes.

REF-11 runs on any 80-column 24-line video terminal with direct cursor addressing and with any printer. Up to 10 terminal types can simultaneously be supported on a computer system.

A version of this product is available for the PDP-11 computer.

Price: \$195 - \$350

Contact: Robert Parker
(203) 247-8500

DG SYSTEMS
322 Prospect Avenue
Hartford, CT 06106

ULISYS

Operating System: VMS

Keywords: • Information management

This turnkey management information system for libraries consists of a set of complex computer programs and computer hardware. The program includes all relevant software for the creation, maintenance, backup, and recovery of all files, which combine to form the ULISYS data base.

Circulation control functions consist of check out/check in, fines management, holds (reserves) management, message storage and retrieval, interbranch/interlibrary loans, activity-status reporting, reserve book room, search, subject and name authority files, recall, and information and referral.

ULISYS includes on-line public access with comprehensive instructions to help inexperienced users locate sought-after material.

The system is also available on a "software-only" basis.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: J. A. Speight, President
(604) 926-7421

UNIVERSAL LIBRARY SYSTEMS

205-1571 Bellevue

West Vancouver, British Columbia V7V 1A6

Canada

Management



Camerique

ACUITY Labor/Other Direct Costs Projections

Operating System: ULTRIX-32, UNIX* (System III, System V),
VMS

Keywords: • Cost accounting • Forecasting
• Project management • Spreadsheets

This forecasting system enables the project manager to accurately estimate project labor costs, nonlabor costs, and revenues, using an interactive spreadsheet format. Used with the other ACUITY systems, planning can include precise labor rates from the payroll system; anticipated revenue, using exact rates for labor overhead, G&A, and fee; and labor hour budgeting. If desired, those forecasts can be entered into the ACUITY Project Management system as budgets. Multiple planners can provide estimates for different portions of large projects. The estimates can be merged for reporting purposes.

Additional features include up to 24 planning periods, separately maintained regular and overtime hours, automatic forecast cloning, consolidation of projections and actuals, department recap of labor requirements, planning of to-be-determined employees, comparisons to standard hours available in a month, and separate nonchargeable departments, which can be excluded if desired.

Designed for companies ranging from 5 to 2000 employees, ACUITY Financial Software offers sophisticated audit trails, security by application and by user, local printer support, and TTY handler for Packet Switched Networks (such as TELENET). Computer Cognition supports end users with a 1-year warranty, with maintenance available thereafter. Installation, training, and customization are available.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$1500 - \$9500

Contact: Sherrell Harper
(619) 474-2010

COMPUTER COGNITION
225 W. 30th Street
National City, CA 92050

ACUITY Project Management

Operating System: ULTRIX-32, UNIX* (System III, System V),
VMS

Keywords: • Cost accounting • Engineering • Government
• Project management

ACUITY Project Management system, when used with ACUITY Payroll, Accounts Payable, Accounts Receivable, and General Ledger, is a full job-cost system tailored to engineering firms and government contractors. Labor costs are collected through Payroll, and other direct costs are collected through Accounts Payable. Those costs are posted to projects and tasks. The costs are then marked up according to the user-

specified billing formula. Reports show actual and marked-up costs as well as budgets (optional). All detail is kept on the system so that project reports can be run for any time period, such as weekly, monthly, year to date, or project to date. The system produces customer invoices on demand.

Additional reports include management cost summary, revenue sources report, chargeability report, unbilled AR report, and detail distribution report. Additional features include activity code maintenance, department reporting, milestone maintenance, subcontractor maintenance, and budgeting by project, task, or period.

Designed for companies ranging from 5 to 2000 employees, ACUITY Financial Software offers sophisticated audit trails, security by application and by user, local printer support, and TTY handler for Packet Switched Networks (such as TELENET). Computer Cognition supports end users with a 1-year warranty, with maintenance available thereafter. Installation, training, and customization are available.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$1500 - \$9500

Contact: Sherrell Harper
(619) 474-2010

COMPUTER COGNITION
225 W. 30th Street
National City, CA 92050

ACUITY Work Breakdown Structure Reporting

Operating System: ULTRIX-32, UNIX* (System III, System V), VMS

Keywords: • Government • Project management • Scheduling

Used in conjunction with the ACUITY Project Management System, ACUITY WBS Reporting is well suited for a familiar government contracting specification. The WBS Reporting System provides greater levels of detail for a user-defined specification of task groupings and a set of reports that reflect those groupings. Up to six levels of user-specified groupings, called WBS units, are allowed with user-specified names for those entities. For each level and each WBS unit, labor hour, cost, and ODC budgets can be specified. Reports show comparison of actual with budgeted amounts for hours and costs or revenues. WBS reports can be run for any date range — weekly, monthly, project to date, and year to date.

Designed for companies ranging from 5 to 2000 employees, ACUITY Financial Software offers sophisticated audit trails, security by application and by user, local printer support, and TTY handler for Packet Switched Networks (such as TELENET). Computer Cognition supports end users with a 1-year warranty, with maintenance available thereafter. Installation, training, and customization are available.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$1500 - \$9500

Contact: Sherrell Harper
(619) 474-2010

COMPUTER COGNITION

225 W. 30th Street

National City, CA 92050

ASA PMS (Project Management System)

Operating System: VMS

Keywords: • Graphics • Project management • Scheduling

This project management system allows both junior and senior schedulers to plan project schedules; to compare the project plan with job performance; to forecast future time, manpower, and cost requirements; and in a simulation mode, to evaluate the impact of management decisions. PMS is flexible and can be used in construction, utility, manufacturing, mining, R&D, and any other industry needing time analysis, resource allocation, and cost control.

The two independent PMS systems are CPM (Critical Path Method) and PDM (Precedence Method). Five major programs are available for the two systems:

- The Time Analysis Program computes the project schedule, compares the project plan with job performance, and produces reports.
- The Resource Allocation Program contains resource-loading and resource-leveling algorithms and produces reports.
- The Cost Program performs cost analysis, based on DOD 7000.2A specifications, computes earned values, and prints reports.
- The Multiproject Program can be used to combine data from separate files for corporatewide management of and interrelated projects.
- The Graphics Program draws well-designed charts on color graphics CRTs, pen plotters, and electrostatic plotters.

The system's modular design allows the user to select modules based on current needs. The system can be later expanded. Inexpensive modifications based on customer specifications are available.

Each Project Management System is installed with a 30-day money-back guarantee. A training program, manuals, and six months of free maintenance are provided.

A version of this product is available for the PDP-11 computer.

Price: \$6400 - \$25,000

Contact: Andrew Sipos
(212) 321-2408

ANDREW SIPOS ASSOCIATES

355-26B South End Avenue

New York, NY 10280

BSO/Planner

Operating System: ULTRIX-32, VMS

Keywords: • Forecasting • Project management • Scheduling

Memory required: 128KB minimum.

This project management system allows software project designers and managers to schedule and plot the tasks and resources of a software project. As a planning tool, BSO/Planner helps you accurately forecast project completion and permits you to optimize resources.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Sales Department

(617) 894-7800

BOSTON SYSTEMS OFFICE, INC.

469 Moody Street

Waltham, MA 02254-9164

Business Management System

Operating System: VMS

Keywords: • Accounting • Decision support

• Financial management • Information management

This fully documented system provides an ongoing reference source as well as a tool for training new employees. The versatility and adaptability of the software applications provide a user-friendly environment.

The interactive programs are in a menu format for ease of use. Error messages prompt the operator for a correct response when invalid entries are made, thereby improving accuracy. An on-line information system helps management to make timely and sound decisions based on accurate information.

The system's structured design provides flexibility and control for the user. The application software packages are totally integrated and designed to work independently or with one another. By choosing only the applications required, users may tailor their systems. Other applications may be added at any time without disruption to the working system.

The system provides order processing, inventory control and purchasing, accounts receivable, sales analysis, accounts payable, general ledger and financial statements, payroll, and customer services inquiry.

Price: \$2000 – \$12,000

Contact: Frank Ciacchi
(416) 475-5155

SYSTEM DYNAMICS CORP.
151 Esna Park Drive
Markham, Ontario L3R 3B1
Canada

CAMIS (Consultants' Accounting and Management Information System)

Operating System: ULTRIX-32, UNIX* (Berkeley)

Keywords: • Accounting • Information management

More than just an accounting package, CAMIS provides the consulting manager and executive with timely information on profitability by department, job, and client; employee utilization; productivity and contribution to profit; status of job billing; details and aging of work in progress; and other data essential to running a tight, well-disciplined, and profitable operation. Despite its power, CAMIS is user friendly, fast, and reliable. The menu-driven format, numerous prompts and messages, help features, error trapping, and sophisticated data backup and recovery procedures make CAMIS simple to use even for those with no prior computer experience. CAMIS is composed of four integrated modules: job cost, accounts receivable, general ledger, and accounts payable.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$3750 – \$12,000

Contact: Joseph Grillo
(617) 965-5059

BETA PRINCIPLES
203 Beethoven Avenue
Newton, MA 01940

Chronometrix

Operating System: VMS

Keywords: • Cost accounting • Data collection • Personnel
• Project management

Memory required: 128KB.

This data collection system, written in DIBOL, provides real-time labor and job-costing information for productivity improvement, planning, and payroll. Applications include payroll, automatic recording of time and attendance information, employee location, employee's work status and performance, productivity, reports for individual and group performance and labor allocation, and job costing by department, cost centers, work orders, or jobs. Data collection and display terminals can be located throughout the office and plant.

A version of this product is available for the PDP-11 computer.

Price: \$20,000 - \$40,000

Contact: John B. Hires

(201) 529-4553

JBH ASSOCIATES, INC.

200 Route 17 South

Mahwah, NJ 07430

DDM-11 (Due-Date Monitor)

Operating System: VMS

Keywords: • Accounting • Law • Project management
• Scheduling

Distribution media: magnetic tape, RL02.

This is a multilevel approach to the management of a work load as it is distributed over a staff. The closed-loop DDM-11 system allows the user to assign tasks with their due or critical dates to individuals. The user may also create cataloged and noncataloged descriptions of repetitive or recurring tasks and enter entries as permanent or nonpermanent. Year-end rollover and mass loading are supported. Assigning and responsible producers, coded tasks and manually input task descriptions, specific date calculations, and client/manager maintenance, including telephone numbers, are supported. The loop is closed by using the event reconciliation feature — marking the event as having been accomplished, by whom, and on what date. Complete historical and archival storage capabilities, along with historical reporting for tracking and audit purposes, are also supported. Reporting by producer, by client, and by task is available. Multiple restrictions can be placed on report generation, allowing the user to tailor a report. Late reports and elapsed-time-to-completion reporting are also supported.

Although developed by a CPA firm for certified public accounting and legal firms, the DDM-11 can be used effectively for project management, controlling service contracts for equipment, and for any other type of management setting in which events must be performed by individuals by specific dates.

A version of this product is available for the PDP-11 computer.

Price: \$995 - \$1995

Contact: C. Lee Cates

(615) 523-0553

DORROUGH PARKS & CO.

119 Summit Hill Drive

Knoxville, TN 37902

DYNAMO

Operating System: UNIX* (Berkeley), VMS

Keywords: • Compilers • Decision support • Energy
• Simulation

This continuous simulation language has been extensively used in the modeling of industrial, social, economic, and engineering systems. The language is easy to learn and therefore quite useful in educational environments.

Model construction is simplified through several DYNAMO features. Equations may appear in any order to facilitate documentation; commonly used functions are built in; debugging is simplified through extensive error checking with clear error messages; and the RERUN capability permits repeated simulations, each with different parameters, without recompiling.

DYNAMO is available on magnetic tape or, for PDP-11V03s, MINCs, or similar LSI-11-based systems, on diskettes.

Educators interested in applications of DYNAMO at the high school or college level may be interested in related publications available from the vendor.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$1500 - \$10,000

Contact: Jack Pugh
(617) 864-8880

PUGH-ROBERTS ASSOCIATES, INC.
Five Lee Street
Cambridge, MA 02139

G/C CUE

Operating System: VMS

Keywords: • Cost accounting • Graphics • Project management
• Report writer

This ready-to-implement management system is capable of tracking a project from beginning to end. The project can be monitored and controlled from creation of the schedule, account tables, and estimates through cost control and forecasting.

The modular system incorporates all project control functions into one integrated package. Each module of the system is tailored to management needs in a specific area of project control: planning and scheduling, estimating, data management, cost and performance measurement, report writer, general ledger, purchase agreement control, accounts payable, property records, CUENET (network graphics), and graphics generator.

Price: \$40,000 – \$130,000

Contact: Paul DeMeo
(215) 775-2600

GILBERT ASSOCIATES, INC.

P.O. Box 1498

Reading, PA 19603

JSS (Job Scheduling System)

Operating System: VMS

Keywords: • Operations • Scheduling

The Job Scheduling System is designed to help automate a VAX data center. Both production and end users may request automatic batch job scheduling and submitting.

The system can submit jobs periodically at a specified time interval, on a calendar basis rather than periodically, or when another job completes or certain events occur; JSS can also suppress job submits on specified days of the week and on holidays, based on user-specified calendars. Other functions include optionally rescheduling a job that is lost in a system shutdown or crash; notifying by mail or broadcast when jobs start or complete; maintaining and reporting on a detailed log of job submits, starts, and completions; and generating hard-copy reports and displays of job status and schedules.

The on-line and menu-driven system contains comprehensive help facilities.

Price: \$4000 – \$6000

Contact: Ted Levine
(415) 872-3217

ICAM TECHNOLOGY CORP.

3201 Crestmoor Drive

San Bruno, CA 94066

Key Conversational Planning System

Operating System: VMS

Keywords: • Inventory • Process control • Scheduling
• Simulation

This interactive system, embodying linear and nonlinear programming and simulation, allows the user to project time forward, optimize based on future conditions and reoptimize, and make conditional changes. Major areas of application are logistics, scheduling, blending, raw material selection, process optimization, purchase and sales option selection, and inventory tracking. The Inventory Exploitation options allow a user to track tank compositions, volumes, and costs through time to compute the best inventory allocation for blending, shipping, receiving, and processing.

1200 Management

Key has 100- to 500-row LP solving capability, a matrix generator, and a report writer, as well as the ability to simulate process change impacts on downstream inventory through time. Scrolling of data tables and reports is standard. Interactive data changing and data entry speed the solution process.

A version of this product is available for the PDP-11 computer.

Price: \$23,750 - \$32,000

Contact: W. G. Welter
(713) 373-1905

ADVANCED MANAGEMENT TECHNOLOGIES

Box 71

Cypress, TX 77429

L/P (Labor Performance), MCBA, Inc.

Operating System: VMS

Keywords: • Data entry • Employment • Payroll • Statistics

L/P helps identify productivity problems and improve labor use. The program permits easy, efficient entry, tracking, editing, and reporting of employee labor performance statistics and earnings and monitors the accuracy of data posted to MCBA's Payroll package.

The package accesses all features through convenient menus, allows reports to be optionally spooled for display or later printing, provides for multiple companies, and controls access to data with a security system. L/P provides for centralized data entry of labor transactions. Labor can be broken into direct and indirect status. The program generates payroll attendance records for calculating payroll and provides for incentive pay. L/P supports clock card entry and editing and prints the Labor Performance Report, showing an analysis of each employee's and foreman's performance and productivity. The program reports on salaried employees as well as on incentive earnings, supports crew labor reporting, and provides for the entry of regular, overtime, and double-time wages.

L/P interfaces with MCBA's Payroll (PR), Shop Floor Control (SFC), Job Costing (J/C), Standard Product Routing (SPR), and Inventory Management (I/M) packages.

A version of this product is available for the PDP-11 computer.

Price: \$2500 - \$4000

Contact: Sales Representative
(818) 957-2900

MCBA, INC.

2441 Honolulu Avenue
Montrose, CA 91020

MANEX (Manpower Expenditure Recording)

Operating System: VMS

Keywords: • Billing • Cost accounting • Employment
• Personnel

This system provides control and analysis of hours booked to projects and overheads within a company and can be applied in any project- or cost center-oriented organization. The principal input document is a weekly time sheet prepared by each person. A range of reports can be generated, giving the weekly and cumulative hour totals by project, overhead, section, activity, and staff agency. In addition, project billing and department costing reports can be produced.

This easy-to-use interactive system with many on-line data checks to minimize errors contains an integral backup program that provides file security and passwords to restrict access to sensitive information. The MANEX coding scheme can be tailored to codes already in use as part of an implementation charge.

Project Software has subsidiaries and distributors in the United Kingdom, United States, South Africa, Australia, and other parts of the world. In the United States, contact John Gillespie (212) 624-2587, Project Software Inc., 257 Hicks Street, Brooklyn, NY 11201.

A version of this product is available for the PDP-11 computer.

Price: £1500 – £3000

Contact: Martin Barnes, Director
061-439 6639 or Telex: 666650
PROJECT SOFTWARE LTD.
Foden Lane, Woodford
Stockport, Cheshire SK7 1PT
United Kingdom

MAPPS (Management and Project Planning System)

Operating System: UNIX* (Berkeley), VMS

Keywords: • Project management • Report writer • Scheduling

MAPPS is a management and planning control tool. Input has been simplified for user ease, and the program features user-friendly operating procedures, with the user having extensive control over the output reports. A unique Select-Sort-Report procedure permits use of more than 27 attributes for selecting data and sorts output in more than 26 ways for more than 28 report formats. Complete user control over the selection and structuring of reports gives this program unlimited flexibility for the decision-making manager. Great success in both use and reporting has been achieved by users with little prior networking experience.

The user can specify problem size and variables to permit efficient use of disk storage space. The program analyzes any arrow or precedence network of up to 32,000 activities. Activities can be scheduled for one to seven work days a week. The day of the week on which the activity

starts and stops can also be specified. Multiple calendars are permitted. Precedence networking permits lag scheduling, which simplifies event scheduling. The system also features event data constraints of "not later than," "not earlier than," or "on" user-specified dates. The program can schedule up to 8000 project days. The user may specify an unlimited number of holidays.

The program permits cost specification for each activity, with reports on both estimated and actual values. With field reports based on updated information, the system can be used to provide a variety of management reports comparing initial information to upgraded actual information. A full audit trail of all changes and up to 14 pages of text are part of every update.

The system has an optional utility with complete screen and plotter graphics. Cash-flow plots, resource usage plots, and network logic can be displayed on the screen, on the printer, or on the plotter, which produces multicolored plots.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$65,000

Contact: Neal B. Mitchell III
(617) 366-0800

MITCHELL MANAGEMENT SYSTEMS, INC.
2000 West Park Drive
Westborough, MA 01581

MARK III Management System

Operating System: VMS

Keywords: • Financial planning • Graphics
• Project management • Scheduling

This comprehensive project planning, scheduling, and cost control management system produces MARK III Schedule Charts and MARK III Resource Graphs. Each output is easy to read and may be custom tailored. Comprehensive and complete project planning is simplified, timely, and accurate. Detail, selective, or summary schedules; resource allocations; and cost requirements are quickly developed and automatically interrelated. Schedule progress, resource consumption, cost commitments or expenditure, earned value, and variance from plan are computer tracked and highlighted for effective management control and visibility. Schedule and cost inputs and outputs are highly flexible. Through MARK III's direct, hands-on use, managers can work with all key program variables.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: F. M. Kavanagh

(818) 782-2900

PROGRAM CONTROL CORP.

7120 Hayvenhurst Avenue, Hathaway Building, Suite 401
Van Nuys, CA 91406

Membership

Operating System: VMS

Keywords: • Data base management • Mailing lists
• Recruiting • Report writer

This highly flexible membership system permits each organization to develop a system appropriate to its needs. The system combines routine membership requirements with the latest word and data processing technologies, permitting easy access to data and providing for the dynamic data processing needs of the organization. Because of the variations among membership organizations, the tools provided quickly customize features needed for membership. The system includes data base management, membership mailing lists, dues accounting, conferences and annual meetings, exhibition management, and word processing.

No longer do you have to use entry and display screens planned for other requirements. Furthermore, new requirements that occur after system installation do not necessitate calling for programming assistance. The system can be expanded by adding new data elements to the data dictionary.

Each time new data elements are added or changed, the data base management system automatically adjusts the files. Existing data entry and display screens are edited in minutes, permitting immediate access to new information. Similarly, existing reports can be edited quickly.

A version of this product is available for the PDP-11 computer.

Price: \$3000 - \$10,000/module

Contact: E. Jackson Smith

(301) 296-9032

SMITH, ABBOTT, AND COMPANY, INC.

300 E. Joppa Road

Baltimore, MD 21204

MIS (Management Information System)

Operating System: VMS

Keywords: • Data base management • Nuclear
• Project management • Security

MIS was developed at the NASA Johnson Space Center to provide an automated system for project management. MIS development objectives include:

- A simple system for the rapid, accurate update and review of the status of any active task in the project
- The ability to store and update desired management-level data and to manipulate the data for display
- The ability to display the information in order to conduct status meetings with many participants
- Provision for a network that enables remote users to exchange and review information
- Provision of an access-limiting security system around the data base

A disciplined goal-oriented program is an effective approach in meeting launch dates. In building a data base to support a goal-oriented program, the project schedule becomes the focal point around which all other information revolves — cost, open items, problems, and narrative status. MIS provides that schedule-centered information system. The design of the MIS system hinges on the Tektronix 4027 color-graphic display terminal and its form fill-out capability. User interface with the MIS data base is through a series of forms for technical assessment; event planning; milestone scheduling with 6-month and 1-, 2-, or 4-year schedule displays; reporting project cost/funding status form and cost trends; and maintaining in the data base information that is not covered by one of the other forms.

Price: \$810

Contact: Customer Support Department
(404) 542-3265

NASA'S COMPUTER SOFTWARE MGT. AND INFO.
CENTER

University of Georgia, 112 Barrow Hall
Athens, GA 30602

MISTER (Management Information System for Time, Expenses, and Resources)

Operating System: UNIX* (Berkeley), VMS

Keywords: • Decision support • Project management
• Scheduling

MISTER analyzes projects during planning and performance phases. Potential time, resource, and cash flow problems may be identified before their occurrence as alternative options are investigated. During the performance of the project, MISTER monitors the progress and shows the impact of changes or irregular events. Selective reporting capabilities provide information from the system for all management and operating levels.

MISTER is primarily a modular system built from a basic package. Specific modules may be purchased to tailor the system.

The basic system includes Time Analysis, which calculates the schedule with time as the only constraint; Update, which enters performance and change information into the data; and Interactive, which provides screen prompting while entering data. Additional modules

include Resources Scheduling, Bar Charts, Plotter, Cost Reporting, Executive Summarization, and Report Generator. MISTER is available in five model sizes. In addition, customization is available.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: \$26,000 – \$65,000

Contact: Marketing Representative
(818) 441-5121

SHIRLEY SOFTWARE SYSTEMS
1936 Huntington Drive
South Pasadena, CA 91030

MOSAIC

Operating System: VMS

Keywords: • Financial analysis • Financial planning
• Forecasting • Statistics

Distribution medium: 9-track 1600 bpi magnetic tape.

This package provides low-cost, easy-to-use access to a powerful set of routines for statistical and econometric analysis and forecasting. The system enables the user to perform basic data manipulation and transformation with a complete set of arithmetic, logical, and basic transformation operators; data management that includes file creation, updating, and retrieval operations; regression analysis; seasonal adjustment; Box-Jenkins univariate and transfer function modeling; plotting; and report generation. The package features a free-format and English-language syntax command structure with defaults. For the Box-Jenkins routines, a single command will generate a complete univariate or transfer function model and forecast. Similar simplicity and power are available for other subsystems of the package. Timesharing is available.

Price: Available upon request

Contact: Brian Lane

(613) 238-4831

INFORMETRICA LTD.

P.O. Box 828, Station B

Ottawa, Ontario K1P 5P9

Canada

PAC EV (Earned Value) Performance Measurement System

Operating System: VMS

Keywords: • Cost accounting • Project management

PAC EV helps in performing detailed project cost and performance trend analyses. PAC EV addresses industry cost-control needs and satisfies Department of Defense, National Aeronautics and Space Administration, Department of Energy, and other government reporting requirements. The system provides a way to accurately identify project

earned value, cost/scheduling variances, and performance trends, thereby allowing management to make timely decisions to ensure successful program accomplishment.

PAC EV provides a wide variety of reporting formats. Contracts may be analyzed across multiple programs and specific projects within a contract. Reports may be organized by selected levels of work breakdown structure, organization, or cost account codes. Traceability into specific problem areas can be accommodated by code-level selection combined with window options to reduce the volume of data to be analyzed. Additionally, graphic chart capabilities are available to further aid the user in the analysis and communication of data.

PAC EV can be automatically linked to the PAC II and PAC III Project Management Systems or can be used as a stand-alone system. Project schedules are maintained in the PAC II and PAC III systems, producing time-phased project control data. Those schedules indicate the sequence of work to be performed and the interdependencies required to meet the project objectives. Work package/activity cost budgets are also maintained in the PAC II and PAC III systems.

AGS Management Systems maintains branch offices throughout the United States and in Canada and Switzerland and has international distributors in Australia, Europe, Indonesia, Israel, South Africa, and South America.

Price: \$40,000

Contact: Thomas J. Kenny, Marketing Director
(215) 265-1550

AGS MANAGEMENT SYSTEMS, INC.
880 First Avenue
King of Prussia, PA 19406

PAC I

Operating System: VMS

Keywords: • Project management • Scheduling • Simulation

This interactive project management system rapidly analyzes, schedules, simulates, and plans projects in engineering, construction, hardware and software development, research and development, and clinical lead-type applications. PAC I provides resource-requirements planning, cost projections, actual costing, and CPM and PERT-type analysis. The project planner may quickly simulate the effects of what-if situations in terms of time, people, dollars, and/or schedule. Project and activity information can be entered easily and edited fully.

AGS Management Systems maintains branch offices throughout the United States and in Canada and Switzerland and has international distributors in Australia, Europe, Indonesia, Israel, South Africa, and South America.

A version of this product is available for the PDP-11 computer.

Price: \$5000

Contact: Thomas J. Kenny, Marketing Director
(215) 265-1550

AGS MANAGEMENT SYSTEMS, INC.
880 First Avenue
King of Prussia, PA 19406

PAC II

Operating System: VMS

Keywords: • Project management

With its extensive array of system capabilities, PAC II can plan, monitor, analyze cost, and manage any type of project. PAC II will simulate, schedule, allocate resources, evaluate networks, develop float, provide target scheduling, and fully support the project manager and planner.

PAC II produces standard reports and offers an easy-to-use report writer to create custom reports. PAC II options include plotter graphics that provide a complete picture of network and critical activities, float, and progress compared to schedule, which may be time scaled and displayed on the basis of user-specified criteria. PAC II also provides management graphics to display schedules and budgets in Gantt and pie charts. PAC II may be interfaced to the PAC MICRO project management system and the ESTIPLAN project estimating system.

AGS Management Systems maintains branch offices throughout the United States and in Canada and Switzerland and has international distributors in Australia, Europe, Indonesia, Israel, South Africa, and South America.

Price: \$44,000

Contact: Thomas J. Kenny, Marketing Director
(215) 265-1550

AGS MANAGEMENT SYSTEMS, INC.
880 First Avenue
King of Prussia, PA 19406

PAC III (Project Management System)

Operating System: VMS

Keywords: • Project management

This network scheduling and cost-processing system can direct and track the most complex multitask projects across functional lines. A totally integrated system, PAC III combines networking, resource scheduling, estimating, and accounting functions into a comprehensive interactive system.

Applications of PAC III include building fuel-generating stations, scheduling the training of pilots for the space shuttle, major data processing projects, managing construction projects, and tracking development of drugs for pharmaceutical companies. PAC III can be used by many departments in a company to provide a single standard for project management.

PAC III includes many standard reports and an interactive report writer for ad hoc reporting requirements. PAC III options feature plotter graphics to provide a complete picture of network and activities, float, and progress compared to schedule; management graphics for displaying schedules and budget information in easy-to-understand Gantt and pie charts; and earned value to help locate variances by comparing scheduled versus actual performance in work effort and budget. PAC III may be interfaced to the micro-based PAC MICRO project management system and the ESTIPLAN project estimating system.

AGS Management Systems maintains branch offices throughout the United States and in Canada and Switzerland and has international distributors in Australia, Europe, Indonesia, Israel, South Africa, and South America.

Price: \$59,000

Contact: Thomas J. Kenny, Marketing Director
(215) 265-1550

AGS MANAGEMENT SYSTEMS, INC.
880 First Avenue
King of Prussia, PA 19406

PAC Management Graphics

Operating System: VMS

Keywords: • Graphics • Project management

PAC Management Graphics provides the project manager with an easy-to-use graphics tool to help in planning, monitoring, and managing projects. The system displays schedules and budgets in Gantt charts, pie charts, histograms, vertical bar charts, and X-Y charts, in color or monochrome.

Input can be entered interactively. Depending on the information required, the graphs can display an entire project, phases of a project, activities and resources within a project or phase, and even cross-project reporting by resource.

Management Graphics provides an easy method for controlling the information to be displayed. A previously created chart may be recalled and displayed, and hard copy can be created from any chart.

AGS Management Systems maintains branch offices throughout the United States and in Canada and Switzerland and has international distributors in Australia, Europe, Indonesia, Israel, South Africa, and South America.

Price: \$13,000

Contact: Thomas J. Kenny, Marketing Director
(215) 265-1550

AGS MANAGEMENT SYSTEMS, INC.
880 First Avenue
King of Prussia, PA 19406

PAC Plotter Graphics

Operating System: VMS

Keywords: • Graphics • Mapping • Project management

This efficient, flexible parameter-driven system produces clear, informative network diagrams and bar charts. The system, written in FORTRAN, can be used by the entire project staff, individual team members, and senior management. The time-scaled networks are easy to read and show the relationship of each activity to the whole project. The user can select the desired time span and scale and can control the number of activities plotted, as well as isolate groups of activities or phases. The PAC Plotter Graphics System is an impressive and effective tool for presentation and day-to-day project operation.

AGS Management Systems maintains branch offices throughout the United States and in Canada and Switzerland and has international distributors in Australia, Europe, Indonesia, Israel, South Africa, and South America.

Price: \$16,000

Contact: Thomas J. Kenny, Marketing Director
(215) 265-1550

AGS MANAGEMENT SYSTEMS, INC.
880 First Avenue
King of Prussia, PA 19406

PAC Printer Graphics

Operating System: VMS

Keywords: • Decision support • Graphics • Presentation aids
• Project management

The PAC Printer Graphics System, written in FORTRAN, provides the project manager with yet another tool to assist in planning, tracking, monitoring, and managing projects. The system interfaces with the PAC Project Management System's master file to display network diagrams. The plotter networks provide the most up-to-date project information, based on the planning and updating of the project data.

The simple, easy-to-use PAC Printer Graphics System requires only one entry for execution. The system uses a line printer or hard-copy device for producing plots and does not require any special graphics or plotting hardware. An extremely effective tool in management

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presentations and team efforts, the system displays the entire project's status, providing the necessary information to aid in decision-making processes.

AGS Management Systems maintains branch offices throughout the United States and in Canada and Switzerland and has international distributors in Australia, Europe, Indonesia, Israel, South Africa, and South America.

Price: \$6000

Contact: Thomas J. Kenny, Marketing Director
(215) 265-1550

AGS MANAGEMENT SYSTEMS, INC.

880 First Avenue

King of Prussia, PA 19406

PERT-PAC

Operating System: VMS

Keywords: • Project management • Scheduling

Using a combination of CP/M and PERT techniques, PERT-PAC is enhanced by the features of automatic updating and rescheduling. PERT-PAC has found wide acceptance in industries ranging from heavy construction to research establishments and from shipbuilding to software development control.

PERT-PAC gives management fingertip control of all aspects of a project's schedule. The on-line editor is easy to use for developing and updating project activities. System output typically includes milestone schedules, baseline slippages, bar charts, and various sorted and selected activity lists. Resource loading and leveling functions are available by using the ALLOCATOR subprogram.

PERT-PAC gives much more than computation of critical paths, slack times, and start and finish dates. This multifaceted system allows ease and flexibility for data input and a myriad of options for listing and reporting.

- User features include fast and easy network development, use of Micronet library options, automated progress assessment and network updating, error detection, diagnostics, on-line help, and graphics output.
- Technical features include an unlimited number of projects for each system, activities for each project, and relationships for each activity. Additional features include I-J node notation, processing of Micronet (super-subnets) and special activities, and direct controlled access to WORK-PAC and MAT-PAC.
- Project features and reporting capabilities include special calendar adjustment and Moslem work week options, resource loading and leveling for automatic, even distribution of limited resources, summary reporting for maximum management visibility, selective detail

reporting generated to any level of interest, baseline schedule variance reporting to measure relative scheduling performance, and critical-activity reporting.

A version of this product is available for the PDP-11 computer.

Price: \$11,500 - \$30,000

Contact: Frank Weston
(301) 263-8593

SPAR ASSOCIATES
927 West Street
Annapolis, MD 21401

PERT6

Operating System: MicroVMS, VMS

Keywords: • Data base management • Project management

This data base-oriented project management information system provides upward and downward compatibility for use on micros or minis and can send and receive data from a centralized project management system running multiproject control. PERT6 features a record of improving project managers' productivity and of allowing users to increase the demands on the system, a powerful report generator for user-defined reports at any desired level across projects, and a user-defined screen generator for foolproof, efficient updating of project data.

In general, PERT6 allows managers to use their own philosophies, by providing alternative ways of defining a project; calculating schedules in light of time, resource, and cost constraints; and providing a feedforward and feedback control system that ensures the highest probability of keeping projects on track.

Price: \$1500/mo - \$39,000

Contact: A. J. Paris
(914) 949-6058

DYNAMIC SOLUTIONS INC.
50 Lytton Avenue
Hartsdale, NY 10530

Practice Management

Operating System: VMS

Keywords: • Accounts receivable • Billing • Scheduling

This system for firms that require a detailed breakdown of time and billing information allows the user to divide a client's work in process into particular matters or engagements. Many accountants use the Practice Management system to process time and billing for some of their attorney clients, making the Practice Management system a source of revenue, as well as a tool for managing the accounting firm.

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The Practice Management system has all the features of the Time and Billing system, as well as multiple-office breakdown capability; 4-digit matter number and 10-digit user-definable sort codes; 999 user-definable billing codes; open-item accounts receivable; automatic invoicing capability — eight invoice formats; statement preparation; production reports and work-in-process reports by client, by matter, or by employee; transaction history file for future scheduling; automatic retainer billing, realization rate, and percentage report; and four billing adjustment allocation methods.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Bob Sprowls

(904) 434-2685

DIGITAL SYSTEMS, A DIV. OF UCCEL

114 E. Gregory Street

Pensacola, FL 32501

PREMINI

Operating System: VMS

Keywords: • Engineering • Project management • Scheduling

Distribution medium: 9-track 1600 bpi magnetic tape.

This powerful and comprehensive critical path-based project management tool applies to almost any high-visibility/high-risk project. PREMINI performs all normal critical-path calculations with single or multiple calendar specifications. Hourly time units can be specified for maintenance, outage, start-up, or commissioning projects. Free Float can be automatically slipped under user control to improve scheduling or cash flow results. The features and algorithms of PREMINI are particularly effective in the resource-constrained scheduling mode. For example, resources need not be allocated uniformly over an activity duration but may be specified in a nonlinear form. Although very powerful, PREMINI is easy to both learn and use.

A versatile report generator is provided. Users can easily and quickly write their own reports and also modify standard reports. The report generator can produce bar charts and listings more than 200 characters wide. Graphics options include user-definable bar charts and network logic diagrams.

The "VTIN" input option (for VAX only) permits the user to easily define menus and input screens for PREMINI, including the specification of such attributes as field names, defaults, and on-line help text.

A version of this product is available for the PDP-11 computer.

Price: \$36,000 – \$56,000

Contact: Jack Way

(416) 488-3088

K & H COMPUTER SYSTEMS (CANADA) LTD.

Box 371, Station K

Toronto, Ontario M4P 2G7

Canada

Project/2

Operating System: VMS

Keywords: • Cost accounting • Data base management
• Project management • Scheduling

This tool for the project planner who uses automated, network-based project planning and control is based on user-defined English-language commands that eliminate the need for a computer or programming knowledge. In a matter of hours, you can learn enough about the command language for successful, independent use of Project/2.

Project/2 scheduling is cost effective, allowing network logic to be refined to meet management's needs. Network scheduling procedures and algorithms are incorporated with such techniques as "time now" progress reporting, network modeling based on what-if situations, resource-constrained scheduling, discontinuous scheduling, target scheduling, multiproject scheduling, and multiple-calendar scheduling.

Project/2 Cost Processor (PCP), based on a hierarchical structure that allows four Work Breakdown Structures (WBSs) for each project, integrates cost, resources, and schedule. Output reports are custom designed through the flexible PCP Report Writer. Costs can be reported at any level in the WBS. This module also allows for cash-flow analysis, actual-cost reporting for comparison to budget, and generation of earned-value reports.

Project/2 Graphics provides clear, effective information display and interfaces with the schedule and the cost modules to produce plotted reports on all aspects of a project's status. Paper, transparency, or a color graphics terminal can be used for reporting. This module provides standard Gantt bar charts, network logic diagrams in arrow or in precedence format, time-phased network diagrams, logical bar charts, work breakdown structure charts, resource distribution histograms, cash-flow curves, and multiple-format management graphics. Project/2 graphics output can be tailored to meet management's requirements.

Project/2's relational data base allows the nonprogrammer to develop applications. The Relational Data Base Processor is a data base management system based on the SQL query language developed by IBM. SQL is a nonprocedural language for data definition, data manipulation, query, and data control. Data is set up in 2-dimensional tables,

and related tables can be linked, enabling the project manager to track such project-related items as drawings, purchase orders, maintenance records, materials inventory, contracts, work permits, and so forth. This project information can be integrated with Project/2's scheduling and cost information.

Price: Available upon request

Contact: Mike Beringer, Vice President, Sales
(617) 661-1444

PROJECT SOFTWARE & DEVELOPMENT, INC.
14 Story Street
Cambridge, MA 02138

ProTrakS (Project Tracking and Scheduling)

Operating System: MicroVMS, VMS

Keywords: • Decision support • Project management
• Scheduling • Simulation

This project management system, designed for non-EDP personnel, permits the user to monitor, plan, and simulate resource use and to schedule both large and small projects. ProTrakS relieves the user of extensive training and features user-friendly operating procedures and on-line help screens. ProTrakS can be effectively used in construction, engineering, research projects, software planning — wherever the tracking of schedules, resources, and costs is important.

ProTrakS provides resource-requirements planning, costing projections, CPM- and PERT-type analysis, and Gantt charts for task and resource schedules (on line and in reports). Up to 10 resources may be defined for each of the tasks. Up to 3000 tasks and 3000 resources may be defined for each project.

Price: \$995

Contact: Michael T. Clark
(408) 998-8211

MANAGEMENT RESEARCH INFORMATION
280 Stonegate Circle
San Jose, CA 95110

PVS (Project Visibility System)

Operating System: VMS

Keywords: • Construction • Graphics • Project management
• Scheduling

This graphics system allows a project manager to quickly focus on activities that are crucial to completing a project on time. Network diagrams highlight the critical path, and extensive bar charts display the current schedule and budget compared to the original plans. With PVS, a project manager can create custom reports that display all desired information (bar charts, spreadsheet, tabular, histograms,

S-curves) on a single page. PVS simplifies the manager's task of developing schedules, estimating costs, and monitoring and controlling the project.

PVS can be used in a batch or interactive mode, with prompts that are keyed to the user's experience level. PVS includes a built-in cost processor, multiple-project capabilities, plotter graphic output, resource allocation, and a custom-report generator. PVS reports display the impact of changes in a schedule and in costs on individual activities and on the entire project. Projects can be viewed in a detailed or a summary form, and project activities can be sorted, selected, and grouped in any way.

Price: \$48,000

Contact: Aleta Thompson
(206) 625-0412
XEBEK, INC.
640 Washington Building
Seattle, WA 98101

RISKAN1/RISKAN2 (Risk Analysis — General/Risk Analysis — Accounting)

Operating System: VMS

Keywords: • Accounting • Decision support • Simulation
• Spreadsheets

RISKAN1 provides a business executive with simulation capabilities and analytical information about strategic planning and/or manufacturing (for example, tolerance analysis). Specifically, the program allows the business executive to analyze and/or compute the expected risk of a proposed product line diversification or company acquisition in terms of the size of the market, the size of the company's investment commitment, and a perceived level of competition — either none or an estimated market share of each competitor — before and after the proposed business venture. The decision maker can also look at manufacturing concerns such as material planning or machining operations in a quality-control operation. The output of the analysis may include an estimate of the numerical risk involved, accompanied by an appropriate recommendation about whether to diversify, and various risk profiles for additional information.

Using this business planning tool, the executive can input a data file and simulate what-if hypotheses concerning, for example, the chances of a successful new-product introduction in a highly competitive marketplace or how the chance of success in a specific market varies with the number of competitors or market share. Graphical output is available to illustrate in an analytical fashion some such relationships. RISKAN1 allows the business executive to simulate the decision-making process under conditions of uncertainty.

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In addition, RISKAN2 provides detailed risk analyses for standard spreadsheet-type accounting (financial analyses), including risk profiles.

The price is a 1-time license fee.

A version of this product is available for the PDP-11 computer.

Price: \$5000 - \$7500

Contact: Jon Prescott

(619) 247-7219

J & S ASSOCIATES

13407 Quapaw Road

Apple Valley, CA 92307

SIBYL/RUNNER® Interactive Forecasting System

Operating System: VMS

Keywords: • Decision support • Financial planning
• Forecasting • Statistics

Distribution medium: magnetic tape in COPY format.

This comprehensive package of programs for time-series analysis and forecasting consists of 18 time-series techniques plus multiple regression. SIBYL provides screening of alternative forecasting techniques and identification of methodologies most appropriate for a given situation. SIBYL/RUNNER reads raw data from a file or from data typed in at a terminal and performs a preliminary analysis of the data. Available analytical techniques include autocorrelation analysis, cyclical identification, and moving average transformations.

The user can, however, override the suggestions and apply any of the 18 available forecasting techniques. Those include Box-Jenkins; classical and Census II Seasonal Decomposition; generalized adaptive filtering; Harrison's harmonic smoothing; time-series multiple regression; exponential smoothing; moving averages; and curve fitting. Also included are comparison and combination of the results obtained from the application of different forecasting methods; data management, such as file creation, file editing, transformation of variables, and graphing; single and linear moving averages; curve fitting; and trend analysis.

The results obtained from applying those forecasting methods are summarized and reported to aid the forecaster in evaluating alternative techniques. The user can review and correct cyclical patterns in the data with manual overrides to the final forecast.

Price: \$15,000

Contact: Tim Davidson
(617) 861-7580

TEMPLE, BARKER & SLOANE INC.
Applied Decision Systems
33 Hayden Avenue
Lexington, MA 02173

SIMSYS (Simulation System)

Operating System: VMS

Keywords: • Financial analysis • Financial planning
• Simulation • Statistics

Distribution medium: 9-track 1600 bpi magnetic tape.

These comprehensive computer programs and files assist in the development and use of econometric models. SIMSYS can provide comprehensive data management facilities; econometric modeling language elements; model checking and debugging; efficient use of computer resources for both large and small models on an annual, quarterly, monthly, or weekly basis; analysis and comparison of solutions; an integrated approach to all phases of model building and use; and management of the modeling process by economics experts. The component programs and files of SIMSYS can be used with Informetrica's MOSAIC, which performs data management and equation estimation.

Price: Available upon request

Contact: Brian Lane
(613) 238-4831
INFORMETRICA LTD.
P.O. Box 828, Station B
Ottawa, Ontario K1P 5P9
Canada

SPMCS (SASI Project Management and Control System)

Operating System: VMS

Keywords: • Construction • Project management • Scheduling

This SPMCS system offers a computerized and graphic method of designing and monitoring project schedules and budgets. SPMCS helps management plan schedule and budget projects, such as construction, design, marketing, or any project that follows a logical sequence to completion. The versatility of SPMCS provides smaller companies with access to the same system that is being used by larger companies. By using precedent-diagramming methods, SPMCS allows the user to interactively establish a critical path network through the input of more than 2000 work item (task) numbers, descriptions, and duration and time schedule relationships. Also included is a means of tracking

project progress and actual expenditures through periodic updates during the course of a project. In addition to the reports, the resultant control network is plotted and becomes simple, easy-to-read graphic output in either network or bar chart form, including a cash flow curve. Management can check on time expended on work tasks and can identify any need for redirection of manpower. The system also strengthens budgeting abilities by providing an ongoing comparison of actual expenditures to those forecasted through the budgeting process. SPMCS calculates projected ending date based on duration and precedence relationships, checks time expended on each task, and plots cash flow curves. SPMCS reports include early/late start and finish dates, float items, estimated versus actual costs, critical path, work status and progress and precedence relationships.

Price: \$5000 - \$10,000

Contact: Earl Tankersley
(602) 839-9075

SOUTHWEST ANALYTICAL SYSTEMS, INC.
P.O. Box 50238
Phoenix, AZ 85076

STRATCOMP

Operating System: VMS

Keywords: • Project management

This strategic data planning tool provides a solid, stable foundation for a top-down analysis of a business. STRATCOMP permits the user to execute a functional decomposition of business requirements from the broad stages or functions, through processes, to the more detailed activities. The product, developed using the fourth-generation language system MIMER, stores the business functions in a dictionary, enabling entity/activity analysis to be carried out.

Price: Available upon request

Contact: Mel Gosling
(44) 0124 734505

SAVANT ENTERPRISES
2 New Street
Carnforth, Lancashire LA5 9BX
England

Time Management

Operating System: VMS

Keywords: • Billing • Cost accounting • Report writer

This program can interface with Digital Systems' Practice Management.

Time Management allows a firm to track the actual time spent, as compared to the time budgeted, for a client or an engagement. Time Management also allows a firm to review time spent last year for a month or a year at the client, engagement, employee, or code level.

The system provides automatic accumulation of time, when interfaced with Practice Management; reporting by month or year; budgeting capabilities; and predefined as well as user-defined reports.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Bob Sprowls

(904) 434-2685

DIGITAL SYSTEMS, A DIV. OF UCCEL

114 E. Gregory Street

Pensacola, FL 32501

Time Series Package

Operating System: VMS

Keywords: • Forecasting • Sales analysis • Statistics

Distribution medium: 9-track magnetic tape.

These programs, written in FORTRAN and VAX-MACRO, provide methods for analyzing time series by following the Box-Jenkins methodology. The collection includes programs for the analysis of univariate time series — for example, sales data — using ARIMA models and programs for modeling a multiple process — for example, sales as a function of advertising expenditures.

Three programs are provided for the analysis of seasonal and non-seasonal univariate time series: IDENT, for identifying a time series model; ESTIMA, for estimating (least squares and maximum likelihood) the parameters of a model; and FRCAST, for making forecasts conditional on the estimates obtained by ESTIMA. For the analysis of a model with one or more independent variables (also called a transfer function model, three programs are available: CROSSC, for identification; TRFEST, for the estimation; and TRFFOR, for forecasting based on transfer function models.

Documentation is available in a detailed primer. In addition, the program gives short explanations in response to a questionmark typed by the user. A time series book, *Applied Time Series and Box-Jenkins Models* by W. Vandaele (1983), is also available from Academic Press.

Price: \$300 – \$1000

Contact: Walter Vandaele

(202) 363-3785

VANDAELE, INC.

3115 34th Street, N.W.

Washington, DC 20008

TOPMAN (Total Planning and Management), Version 2.0

Operating System: VMS

Keywords: • Graphics • Project management • Report writer
• Scheduling

This system relieves project and functional managers of time-consuming planning and record-keeping tasks through calendar-based graphic and straightforward reports. Great flexibility and a variety of reports are available for project, division, subdivision, or individual use. TOPMAN handles multiproject networking.

- Initial planning: Project staff sets up a plan, including an activity list, start dates or dependence on other activities, span times, estimated resources required, milestones, and department or individual responsibility assignments.
- TOPMAN generates Gantt chart plots to show activity descriptions, span times, critical path, dependencies, milestones, and responsibility assignments. Budgeted resource data is displayed in distributed or cumulative graphic plots and printer reports.
- Updating: Work progress, resource expenditures, exception reporting criteria, and/or plan amendments are entered by the user.

TOPMAN generates bar chart, graphic plot, and printer reports to reflect work achieved in activities, probable complete dates, slack, a recalculated critical path, resources expended, dollars required to complete, earned value, cost trend, cost variance, and exception reports. Exceptional flexibility is afforded by SCOUT, our interactive screen-oriented tabular report generator.

Combined with our Interactive TOPMAN Preprocessor (ITP), TOPMAN is very "user friendly." ITP steps the user through a series of screen-displayed forms to build a project schedule plan and budget. As work proceeds and costs are incurred, prompts lead the user through updating and replanning cycles to help the project manager control the project.

A version of this product is available for the PDP-11 computer.

Price: \$20,000 - \$30,000

Contact: G. H. Marlow, President
(215) 348-1200

APPLIED MANAGEMENT METHODS, INC.
201 N. Broad Street
Doylestown, PA 18901

VISION

Operating System: VMS

Keywords: • Data base management • Graphics
• Project management • Scheduling

VIS1ON, a complete stand-alone or distributed interactive project management information system designed for non-EDP personnel, requires no programming knowledge or use of complicated commands. Instead, function keys, menus, and formatted screens make VIS1ON easy to learn and use. Flexibility is provided by a relational data base management subsystem that allows screen queries, free-format reports, and interfacing to other application data bases. Graphics are used extensively to simplify complicated reporting to project personnel, management, and customers. The Performance Measurement subsystem makes the analysis of complicated interactions between schedule and cost information easy and provides extensive reports and graphs that help meet the C/SCSC requirements of DOD, DOE, and NASA.

VIS1ON features an integrated schedule and resource and cost data base; up to 32,000 activities for each project; what-if analysis; user-defined coding structures; multiple calendars; network, bar chart, and XY graphics; multiple project and multiple resource allocation, tracking, and projection; and baseline or target comparisons.

This comprehensive system is backed by professional support, consulting, on-site training, documentation, and routine product enhancements from an organization dedicated solely to project management. Some industries served include aerospace, defense, government, construction, shipbuilding, energy, and research and development.

Price: \$30,000 – \$100,000

Contact: Beverly Keeley
(714) 680-0910

SYSTONETICS, INC.

801 E. Chapman Avenue
Fullerton, CA 92631

VUE

Operating System: ULTRIX-32, UNIX* (Berkeley), VMS

Keywords: • Construction • Project management • Scheduling

This interactive project management system uses the critical-path method to spotlight activities that need to be completed on schedule. Up to 3000 activities can be tracked for each project, with almost unlimited activities available through the multiproject option.

VUE is easy to use and menu driven, requiring minimal user training. The project manager can modify information, see the project from several perspectives, generate what-if scenarios, and respond to unexpected developments with new schedules and strategies.

VUE's reports show the impact of changes in timing, cost, and resources on activities and on the overall project. Those reports cover the entire project, the activities of one team or department, or groups of activities. VUE's standard report selection includes network diagram, bar chart, schedule, progress, activity times, predecessor, node schedule, cost, resource, and current work.

Available options for VUE include multiproject capability, plotter graphics output, time-scaled network diagram, and a custom report generator.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$16,000 - \$26,000

Contact: John Enyedy
(408) 257-7700

NATIONAL INFORMATION SYSTEMS
20370 Town Center Lane, Suite 130
Cupertino, CA 95014

WICOMO — Software Cost Estimation Tool

Operating System: UNIX* (Berkeley), VMS

Keywords: • Cost accounting • Forecasting
• Project management • Scheduling

Distribution media: magnetic tape.

WICOMO is an interactive software cost-estimation model based on the COCOMO model developed at TRW and described in Barry Boehm's book *Software Engineering Economics* (Prentice-Hall, 1981). Distributed to more than 80 companies and written in Pascal, screen-oriented WICOMO requires the use of a CRT terminal.

WICOMO calculates estimates of work months of effort, cost, and schedule time required for a project, based on its size and a number of additional parameters (called cost drivers) — required software reliability, product complexity, virtual machine volatility, analyst and programmer capability, programming language experience, use of software tools, data base size, execution time constraint, computer turnaround time, analyst experience, virtual machine experience, required implementation schedule, and use of modern programming practices. The input to the model consists of the development mode (organic, semidetached, or embedded), values for each of the 14 cost drivers (may be specified for each module), the cost per work month of analyst and programmer time (may be specified for each module), and an estimate of the number of source instructions (may be specified for each module).

* UNIX is a trademark of AT&T Bell Laboratories.

Price: \$70

Contact: Manager, Software Distribution
(617) 649-9731

WANG INSTITUTE OF GRADUATE STUDIES
Tyng Road
Tyngsboro, MA 01879

THE RECORD OF THE REVENUE DEPARTMENT, 1880-1881.

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Manufacturing



Black Star Publishing Company/Andrew Sacks

2/D Scrapsaver

Operating System: ULTRIX-32, VMS

Keywords: • Bill of materials • Metals • Production control
• Shop floor control

Distribution media: magnetic tape, RL02, RX02.

This system is the industry's leading software package for solving 2-dimensional cutting stock problems in the metal fabrication, paper and board, lumber, and glass industries. The 2/D Scrapsaver uses a time-tested proprietary algorithm and generates numerical control tapes or DNC files for the Warner & Swasey Optishear family as well as other N/C shears. Options exist for manual shearing.

The 2/D Scrapsaver provides rigid control over scrap, uses a fast algorithm that explicitly considers a variety of operational constraints, accommodates mandatory and optional orders with or without penalty costs, allows simultaneous scheduling of items with and without specified grain orientation, evaluates the use of alternative master size sheets (panels), simultaneously schedules multiple master sizes based on variable cost and availability, sequences patterns to reduce in-process time for parts, provides for exact order fulfillment, interfaces easily to preprocessors for data input or postprocessors for specialized reporting and flexible machining systems integration, and handles up to 100 part orders, depending on the make and model of computer.

A version of this product is available for the PDP-11 computer.

Price: \$16,000 - \$22,500

Contact: Bruce Michel
(513) 874-6464

MANAGEMENT DECISIONS DEVELOPMENT CORP.
7209 Dixie Highway
Fairfield, OH 45014

A-CLASS

Operating System: ULTRIX-32, UNIX* (Berkeley), VMS

Keywords: • Data base management • Information management
• Production control

This system provides classification and coding systems for group technology, design retrieval, and computer-aided process planning. Computer graphics systems require classified design libraries to provide total recall of existing designs for design research. A-CLASS is modular to provide for classified files of raw materials, commercial parts, manufactured piece-parts, assemblies and finished products, tooling, jigs and fixtures, and machine tools and capital equipment. Computer-aided process planning systems use A-CLASS class codes for structured files of process plans and generative process planning data.

Extended manufacturing data base systems use A-CLASS multicode for part family manufacturing and group technology analysis. Use of class codes for FMS planning provides maximum visibility of opportunities for integrated manufacturing systems and optimum cell design. A-CLASS can be used to implement and upgrade MICLASS and MULTIGROUP systems and is ideal for programming Brigham Young D-CLASS file handlers. N/C programming uses A-CLASS class codes to develop master family programs for families of similar parts. Integrating A-CLASS class codes with MRP systems increases production by grouping parts into families for common processing using similar setups and tooling.

Turnkey applications are available on fixed-fee development contracts.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$5000 - \$150,000

Contact: Giles E. Lovelace

(803) 577-7838

LOVELACE LAWRENCE & CO.

23 Broad Street

Charleston, SC 29401

ABC/Inventory System

Operating System: MicroVMS, VMS

Keywords: • Inventory • Warehousing

This on-line multiple-warehouse multiple-location inventory system, written in COBOL, provides information on what is stored and where, cost, quantity, whether reserved or on order, and what to reorder. Inventory items and parts can be reserved and/or spot-issued. Screens provide the status of a requested stock item, a description, the quantity on hand and on order, the number reserved, the price, a store's location, the order-point minimum, the economic order quantity, the expected delivery date, and the substitute-stock number. A store's catalog showing all stock items by warehouse or total can be printed on demand. Monthly stock activity, turnover, and day's use reports are also available. Daily shortage and reorder reports are automatically issued to provide purchasing data.

A version of this product is available for the PDP-11 computer.

Price: \$11,000

Contact: V. W. Ruskin

(604) 682-3808

ABC MANAGEMENT SYSTEMS INC.

805 Dupont Street, Suite 3

Bellingham, WA 98225

ABCON (Automated Batch Control)

Operating System: VMS

Keywords: • Graphics • Pharmaceutical • Process control
• Real time

This batch control package provides a simple modularized approach to batch process control and includes recipe building and modification, step sequencing, and process function activation. ABCON is interfaced to the process through programmable controllers or other suitable I/O hardware. The package permits automatic, semiautomatic, and manual execution of steps; allows monitoring of multiple steps for proper cutoff; and provides accurate reports on each batch.

A version of this product is available for the PDP-11 computer.

Price: \$25,000 - \$60,000

Contact: Jorge Llansa
(713) 496-3220
SETPPOINT, INC.
950 Threadneedle
Houston, TX 77079

ABC/Work Order Management System

Operating System: MicroVMS, VMS

Keywords: • Cost accounting • Project management
• Scheduling

This on-line system, written in COBOL, performs planning, scheduling, and time and cost control for work-order management in industrial, commercial, service, and government operations. The system runs on all major mainframes or minis, dedicated micros, or time-share systems. The system contains a data base and five modules:

- Labor tracks time slips for job progress, cost for work order, and interface for payroll.
- Planning reviews backlogged, in-process, and completed work orders. Screens instantly show status, costs, and labor hours of every job. Work orders are automatically scheduled in order of priority, according to manpower craft availability.
- Net Capacity computes work hours available by craft and by backlog, providing estimating standards for time slots and repetitive jobs.
- Performance Control provides daily activity, weekly, and monthly performance reports.
- Budget highlights actual versus budget.

Price: Available upon request

Contact: V. W. Ruskin
(604) 682-3808
ABC MANAGEMENT SYSTEMS INC.
805 Dupont Street, Suite 3
Bellingham, WA 98225

ACUITY Bill of Materials Processor

Operating System: ULTRIX-32, UNIX* (System III, System V), VMS

Keywords: • Bill of materials • Inventory • Purchasing
• Shop floor control

ACUITY Bill of Materials Processor keeps track of all the raw materials, parts, and subassemblies that are used to create a finished product. The processor interfaces to the ACUITY Customer Order Processing and ACUITY Inventory Management systems. The system allows full product-structure file maintenance with user-assigned sequence of components. Quantity per parent can be specified to four decimal places and can be negative to create modular bills. Scrap and shrinkage can be specified. New bills can be created by copying parts of old ones. The system allows obsolete, forecasted/planned, and active bills with up to 12 levels of subassemblies and replaces all occurrences of an obsolete item with a replacement part. The system prints a single-level bill of materials report, single-level where-used report, indented bill of materials report, and end-item where-used report.

Designed for companies ranging from 5 to 2000 employees, ACUITY Financial Software offers sophisticated audit trails, security by application and by user, local printer support, and TTY handler for Packet Switched Networks (such as TELENET). Computer Cognition supports end users with a 1-year warranty, with maintenance available thereafter. Installation, training, and customization are available.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$1500 - \$9500

Contact: Sherrell Harper
(619) 474-2010

COMPUTER COGNITION
225 W. 30th Street
National City, CA 92050

ADACS (Advanced Distributed Acquisition and Control System)

Operating System: VMS

Keywords: • Process control • Real time

ADACS provides a fill-in-the-blanks system that allows the user to configure analog or digital scan point, scan rate, alarm limits, continued action, and historical data storage parameters. The user may also build custom colorgraphics display screens and link them to point in the data base for real-time refresh and/or data entry. The system also provides for custom update and logs and custom calculations.

A version of this product is available for the PDP-11 computer.

1230 Manufacturing

Price: \$15,000 – \$150,000

Contact: Jerry Myers

(713) 486-1712

MODULAR DATA SYSTEMS, INC.

2525 Bay Area Boulevard, 3rd Floor

Houston, TX 77058

ADLIB

Operating System: VMS

Keywords: • A/D, D/A • Device drivers/handlers
• Quality control • Shop floor control

The ADLIB subroutine software packages support ADAC's extensive line of analog and digital I/O boards for use with DIGITAL minicomputers. ADLIB gives the user a flexible real-time data acquisition and control software package that uses easy-to-understand subroutine calls. The packages support analog high-level, low-level, and thermocouple inputs and achieve maximum throughput rate.

DMA operation with ADAC's 1622 controller provides direct transfers to and from Q-bus memory. Applications requiring voltage or current loop outputs are also provided. The analog routines allow the user to select sequential or random-access channels, programmable gain amplifier settings, internal or external triggering, and many other parameters. Digital inputs and outputs, real-time clock functions, pulse counting and generation, and ADAC's multiple-interrupt controller are also fully supported.

A version of this product is available for the PDP-11 computer.

Price: \$595 – \$1295

Contact: Lawrence Pelavin

(617) 935-6668

ADAC CORP.

70 Tower Office Park

Woburn, MA 01801

Advanced Manufacturing System

Operating System: VMS

Keywords: • Bill of materials • Inventory • Production control
• Purchasing

This fully integrated on-line interactive system uses state-of-the-art manufacturing management tools and data processing techniques to provide managers with the necessary tools to collect and analyze information and to make changes where necessary to help run their businesses more effectively. The system, written in COBOL and using DIGITAL's CODASYL Database Management System, VAX-11 DBMS, offers sophisticated functionality for medium to large manufacturing companies. The applications include inventory control, bill of

materials, master production scheduling, material requirements planning, capacity planning, production control, purchasing, sales order processing, and costing.

Price: \$10,000 – \$20,000/module

Contact: Karen Kleinman

(617) 964-3890

TEC COMPUTER SYSTEMS, INC.

30 Tower Road

Newton, MA 02164

AIM (Automated Industrial Monitoring)

Operating System: VMS

Keywords: • Data collection • Energy • Facilities management
• Process control

AIM is a field-proven standard software product used to monitor and control industrial processes. AIM is a plant automation and supervisory process control system that scans, alarms, trends, logs, and provides closed-loop control of the industrial process.

The system is defined by using a fill-in-the-blanks language that specifies plant inputs, control outputs, and any special calculations and logic procedures. The system provides user-created color graphics displays and interacts with operator keyboard consoles to allow plant operator control and easy access to plant data. Optional software packages are available to further enhance AIM's capabilities.

For users requiring special applications, AIM provides FORTRAN subroutines to access the complete data base, thus allowing interaction with standard processing. Since AIM makes no modification to the operating systems, benefits are realized by its upward compatibility to DIGITAL's current operating system level.

AIM has been applied in chemical plants, refineries, steel plants, water treatment and manufacturing facilities, and laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$36,000 – \$72,000

Contact: Gerald D. Newman

(713) 789-8880

BILES & ASSOCIATES

6161 Savoy Drive, Suite 500

Houston, TX 77036

AIM Batch (Automated Industrial Monitoring)

Operating System: VMS

Keywords: • Chemical • Data collection • Process control
• Real time

1232 Manufacturing

AIM Batch is a field-proven standard software product used to monitor and control continuous, batch, or semicontinuous industrial processes. AIM Batch is a plant automation and supervisory process control system that scans, alarms, trends, logs, and provides closed-loop control of the process.

AIM Batch uses a simple fill-in-the-blanks language and CRT-prompted communications to allow nonprogrammer process engineers to easily define and modify batch sequences and recipes. The system provides user-created color graphics displays and interacts with operator keyboard consoles to allow plant operator control and access to plant data. Optional software packages are available to further enhance AIM Batch's capabilities.

For users requiring special applications, AIM Batch provides FORTRAN subroutines to access the complete data base, thus allowing interaction with standard processing. Since AIM Batch makes no modification to the operating systems, benefits are realized by its upward compatibility to DIGITAL's current operating system level.

AIM has been applied in chemical plants, refineries, steel plants, water treatment and manufacturing facilities, and laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$45,000 - \$90,000

Contact: Gerald D. Newman
(713) 789-8880

BILES & ASSOCIATES
6161 Savoy Drive, Suite 500
Houston, TX 77036

AIMS (Advanced Integrated Manufacturing Systems)

Operating System: UNIX* (System V)

Keywords: • Bill of materials • Inventory • Scheduling
• Shop floor control

AIMS is an integrated manufacturing management information system. The package is designed in modules and can be installed as a total system or piecemeal; other modules may be added as required.

Free updates, a toll-free support line, on-site installation and training, and limited customization are provided. A comprehensive software maintenance program is available.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$6000 - \$26,000

Contact: Ram Todatry
(312) 850-7244 or (800) 323-6885

MARTEK, INC.
825 N. Cass Avenue
Westmont, IL 60559

Allen-Bradley Translator Software

Operating System: VMS

Keywords: • Programming tools • Translators

Distribution medium: 800/1600 bpi magnetic tape.

This software provides users of Allen-Bradley programmable controllers with a means of documenting programmable controller logic by merging explanatory text comments with ladder diagram displays. Complete cross-reference listings, identification of data table contents, alphanumeric sortings of mnemonics, and graphic representations of I/O usage are also included with each product. When the Translator Software is used with NET Communication Software, the user can upload and down-load programmable controller programs over the Allen-Bradley Data Highway.

A version of this product is available for the PDP-11 computer.

Price: \$6700 – \$8040

Contact: Joe Walker, Senior Product Engineer
(216) 449-6700 ext. 3810

ALLEN-BRADLEY CO.

747 Alpha Drive

Highland Heights, OH 44143

ANVIL™-4000

Operating System: VMS

Keywords: • CAD/CAM • Engineering • Graphics

These CAD/CAM software products provide a modular approach to a company's engineering needs. For computer-aided design requirements, the ANVIL software products provide drafting, design, and analysis functionality. For full computer-aided manufacturing functionality, the products enable the user to complete the manufacturing process with complete applications capabilities.

The base personal CADD system may be expanded to fit the company's needs and resources. MCS provides full training, maintenance, and documentation.

Price: \$17,500 – \$228,000

Contact: Kathy Major
(714) 951-8858

MANUFACTURING AND CONSULTING SERVICES,
INC.

9500 Toledo Way

Irvine, CA 92718

APPS/2 (Automatic Part Programming System, Version 2)

Operating System: VMS

Keywords: • CAD/CAM

1234 Manufacturing

APPS/2 simplifies the preparation of part programs for NC and CNC machine tools. The core system uses input from a digitizer to define the geometry of complex contour shapes. That set of basic geometric data is then smoothed and analyzed by the system software to determine the arc and straight-line components of the shape. A postprocessor translates the arcs and straight lines into the command format that will drive the desired machine tool. Any 2-dimensional cutting operation is a potential application.

Although developed primarily for contoured nondimensioned shapes, APPS/2 also digitizes straight lines, arcs, and skips by specifying endpoints rather than by tracing. That form of entry is called point-to-point mode. A third mode provides for the direct keyboard entry of data when dimensions are well defined. All three entry modes may be used interchangeably on a single piece.

Software (\$15,000) includes one postprocessor and is maintained free for two years, including updates. In general, the digitizer and the digitizer interface board are purchased with the software package.

A version of this product is available for the PDP-11 computer.

Price: \$15,000 - \$31,500

Contact: Robert P. Whitten, President
(617) 655-6610

ALDEN COMPUTER SYSTEMS CORP.
27 Strathmore Road
Natick, MA 01760

APT IV V3A

Operating System: VMS

Keywords: • CAD/CAM • Documentation • Engineering
• Pre- and postprocessors

Distribution medium: 1600 bpi magnetic tape.

APT IV V3A, written in VAX-11 FORTRAN and MACRO, is the current standard APT numerical control tape-preparation system. The VAX implementation retains all the features of the APT system and is fully compatible with existing APT part programs.

The VAX implementation of APT IV V3A is identical to the APT IV system as implemented on the DECsystem-10/DECSYSTEM-20 and the IBM family of computers. The package includes the latest sculptured-surface processor, SSX8, which allows for extremely complex surface definitions. Standard APT postprocessors are adaptable to the system, with minor modifications needed to get items to compile under VAX-11 FORTRAN.

Part programming manuals and an installation guide are shipped with the system.

Part programming seminars on location are available through Black Hawk College.

Price: \$10,000 – \$12,000

Contact: Laurie Krack

(309) 796-2232

BLACK HAWK COLLEGE, DATA SERVICE CENTER

6600 34th Avenue

Moline, IL 61265

AUTO-BOP

Operating System: VMS

Keywords: • Data collection • Inventory • Metals
• Process control

AUTO-BOP is a complete oxygen control system. Application functions contained in the AUTO-BOP package are charge design, alloy additions, optimum heat assignment, heat summary log, data communications, operating data analysis, programmable controllers, monitor and alarming, and terminal manager.

A version of this product is available for the PDP-11 computer.

Price: \$25,000 – \$50,000

Contact: David L. Schroeder

(412) 776-3130

PROCESS CORP.

163 Thorn Hill Road

Warrendale, PA 15086

AUTO-MET and Q-VAR

Operating System: VMS

Keywords: • Data collection • Electrical • Metals
• Process control

AUTO-MET Materials Management and Q-VAR Energy Management application packages for electric furnace control systems contain the following application functions: alloy-addition calculation with properties correlations, charge design, purchasing model, optimum heat assignment, heat summary log, pellet feed, power input control, bath temperature, power demand, secondary metallurgical process, inventory control, monitor and alarming, data communications, operating data analysis, programmable controllers, gas demand, and terminal manager.

A version of this product is available for the PDP-11 computer.

Price: \$50,000 – \$75,000

Contact: David L. Schroeder

(412) 776-3130

PROCESS CORP.

163 Thorn Hill Road

Warrendale, PA 15086

AWRAP (Wire Wrapping for GD Fully Automatic Machines)

Operating System: VMS

Keywords: • CAD/CAM • Electrical

AWRAP is an interactive program for the production of control media for the Gardner-Denver 14FV and 14FS automatic wire wrapping machines. The program, written in FORTRAN, is menu driven, so an individual needs no prior knowledge of computers or programming to achieve successful results. Data may be entered directly through the keyboard of the VDU when in the interactive mode, or the program may be interfaced to access data from a CAD-produced file.

The package also comprises a master file for the storage of geometric definitions of sockets and complete boards in constant use. The storing of standard board geometry in the master file and the format of data entry are compatible with the program WWRAP for semiautomatic wire wrapping machines.

Program features include powerful editing facilities; level assign; additional patterns; routing, using NOGO areas, channels, and routing points; manual and automatic pallet shift selected by the program; programmable dressing fingers; plot of board geometry; wrap count and wire length summary; string list or from/to input; wire grouping and choice of wiring order; and inch/metric input and output.

A version of this product is available for the PDP-11 computer.

Price: £17,500

Contact: K. E. Cole

(0905) 53335

STAVELEY COMPUTING

Blackpole Road

Worcester WR3 8TH

England

BASEWAY Software

Operating System: VMS

Keywords: • Application development • Production control
• Shop floor control

BASEWAY software monitors and controls industrial control devices such as programmable controllers and bar code readers. Through custom software applications, BASEWAY software can also accommodate robots, material-handling equipment, and NC machines. Those applications allow real-time access to information about the entire production process.

BASEWAY software integrates industrial controllers on the factory floor with manufacturing applications operating on the VAX host computer. BASEWAY software also provides one common user interface to the computer system network, applications, and shop floor devices. The

integration of BASEWAY software and manufacturing software applications provides increased productivity through prompt identification of problems, improved quality control, reduced scrap and rework, and expandability.

BASEWAY software consists of three software components:

- Shop Floor Gateway acquires data from industrial controllers by either continuous polling or direct access.
- BASEWAY Application Bus provides a common data source for the use and development of manufacturing applications software packages.
- BASEWAY Programmable Device Support Application Package allows for the uploading and downloading of programmable controller programs.

Custom applications can be developed to address the specific manufacturing needs of each customer. Some typical applications include production monitoring, maintenance management, factory alarm annunciation, quality reports, and equipment cycle and maintenance reports.

Refer to SPD #14.85.xx, #26.66.xx, and #26.67.xx when requesting further information on this product from your local DIGITAL sales office.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Consult your local DIGITAL sales office (see Introduction).

BEDAT-11 Factory/Shop Data Collection

Operating System: VMS

Keywords: • Data collection • Process control
• Production control • Shop floor control

Distribution media: magnetic tape, RL02.

This data acquisition system is used in machine and process control, energy management, inventory control, factory data collection in serial production, and order production. The heart of the system is the multifunction industrial terminal, TB-21, which can be used as a terminal as well as a console or control center for instruments and small systems.

TB-21 uses a 16-bit microprocessor. Functions are decentralized to the terminal. As a result, integrating BEDAT-11 into existing shop floor and manufacturing systems requires little change in organization.

A version of this product is available for the PDP-11 computer.

Price: \$2050 - \$2850

Contact: Robert L. Hirtle, Office Manager
(904) 433-7578

ATS DATA PROCESSING, INC.
1101 North 9th Avenue
Pensacola, FL 32501

BOMP-11 (Bill of Material Processor)

Operating System: VMS

Keywords: • Bill of materials • Information management
• Inventory • Project management

The BOMP-11 system organizes and maintains a central information system linking product structure records with master (inventory-type) records. Single- and multilevel explosion and implosion options are provided, enabling the operator to produce listings that may be directed to the CRT or the line printer. BOMP-11 provides for full file maintenance of master and product structure records, along with audit trails of maintenance transactions.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: John T. Rasted
(203) 265-2226

SOFTWARE DYNAMICS, INC.
1000 Yale Avenue, P.O. Box 500
Wallingford, CT 06492

BOMP (Bill of Material Processor), MCBA, Inc.

Operating System: VMS

Keywords: • Bill of materials • Materials handling

BOMP is a multilevel bill of materials processor that allows full product structure maintenance and fast sort of the product structure file; provides for user-controlled product structure file reorganization; allows user-assigned sequence of components and permits specification of components' attaching operation; supports quantity for each parent to four decimals; permits specification of scrap/shrinkage; supports obsolete bills, forecasted/planning bills, and modular bills; prints/displays the single-level bill of materials, single-level where-used, indented bill of materials, indented where-used, and summarized bill of materials reports; interfaces to six other MCBA application packages; and supports security system and multicompany capabilities.

A version of this product is available for the PDP-11 computer.

Price: \$3000 - \$4500

Contact: Sales Representative

(818) 957-2900

MCBA, INC.

2441 Honolulu Avenue

Montrose, CA 91020

BOMS (Bills of Material System)

Operating System: VMS

Keywords: • Bill of materials • Inventory • Materials handling

The White Hat BOMS module helps firms to accurately control the manufacturing process. BOMS is a comprehensive multilevel bills of material system designed as an optional feature of the White Hat Inventory Management and Control System (IMCS). Parent and component items are referenced by their item keys as identified in Inventory's Item Master File. Operating in a conversational, interactive mode, the user maintains bills of material component lists from which BOMS automatically structures the where-used component lists.

Price: Available upon request

Contact: Linda M. Dobias

(617) 933-3780

WHITE HAT SYSTEMS, INC.

331 Montvale Avenue

Woburn, MA 01801

CAEPS (Computer-Aided Estimating and Planning System)

Operating System: MicroVMS, VMS

Keywords: • CAD/CAM • Cost accounting • Scheduling
• Shop floor control

This user-friendly, menu-driven package, written in FORTRAN, establishes manufacturing work standard times and costs. CAEPS's powerful method-improvement facility is particularly suitable for estimating sales and for improving productivity programs. Better scheduling is possible when CAEPS is used with scheduling and production control systems. CAEPS can be linked to most existing routing files or can provide its own routings with detailed descriptions. The system has powerful hooks to CAD systems and includes modules for machining, electronics assembly, toolrooms, indirects, heavy assembly, welding and sheet metal, and clerical functions.

Price: \$50,000

Contact: Jim H. Heward

(714) 951-5755

RCG INBUCON PRODUCTIVITY SERVICES, INC.

22865 Lake Forest Drive

Lake Forest, CA 92630

CAM.APT.SURF — 5-Axis Processor with Sculptured Surfaces

Operating System: MicroVMS, VMS

Keywords: • CAD/CAM • Numerical control
• Pre- and postprocessors • Programming tools

Memory required: 1MB.

This fully supported and enhanced capability of SSR1, SSV1, and APT IV processes sculptured surfaces and APT programs for numerically controlled (N/C) machine tools, from simple drills or lathes to the most complex 4- and 5-axis continuous-path machines. APT, written in FORTRAN, is a powerful language processor and is the industry standard. CAM.APT.SURF covers 3-dimensional and sculptured geometries plus the conventional geometric surfaces and full 5-axis APT tool control statements. A computer graphic verification of user-defined surfaces and an automatic cutter-path generation are included.

A version of this product is available for the PDP-11 computer.

Price: \$6600 — \$12,000

Contact: John J. Nassr
(514) 697-8033

ICAM TECHNOLOGIES CORP.
1900 Sources Boulevard
Pointe Claire, Quebec H9R 4Z3
Canada

CAM.CAL2 — Advanced APT Graphics Tutorial

Operating System: MicroVMS, VMS

Keywords: • CAD/CAM • Computer-aided instruction
• Numerical control • Programming tools

Memory required: 1MB.

This module, more advanced than CAM.CAL1, has about four times the course content and covers the full 3-dimensional aspects of geometry and motions. CAM.CAL2 teaches APT and APT programming for NC machines by using computer-aided learning (CAL) techniques to establish the relationships among the part geometry, the tool motions/instructions, and the APT language statements. That knowledge reduces CAD/CAM system learning span time and facilitates the link between CAD and CAM functions. The system trains engineers and draftspersons before their involvement with CAD systems and is an essential base for all CAM functions, including machining.

A version of this product is available for the PDP-11 computer.

Price: \$2400 – \$4050

Contact: John J. Nassr
(514) 697-8033

ICAM TECHNOLOGIES CORP.
1900 Sources Boulevard
Pointe Claire, Quebec H9R 4Z3
Canada

CAM.DES — 2½D CAD System

Operating System: MicroVMS, VMS

Keywords: • CAD/CAM • Mechanical engineering
• Process control • Project management

Memory required: 1MB.

This color or monochrome CAD system, written in FORTRAN and developed for professionals in engineering, design, and drafting, improves productivity, accuracy, and engineering layout/plan/working drawing appearance. Interactive commands are incorporated in ergonomic design to make the system easy to learn and use. Engineering drawings in any size or format can be created, using features found only in more expensive systems. The user's language is in English or French.

A version of this product is available for the PDP-11 computer.

Price: \$7125 – \$12,375

Contact: John J. Nassr
(514) 697-8033

ICAM TECHNOLOGIES CORP.
1900 Sources Boulevard
Pointe Claire, Quebec H9R 4Z3
Canada

CAM.FIVE.S — Advanced CAM Software Package of Five Systems

Operating System: MicroVMS, VMS

Keywords: • CAD/CAM • Mechanical engineering
• Numerical control • Programming tools

Memory required: 1MB.

This system, written in FORTRAN, includes full sculptured surfaces and a 5-axis APT language processor to give the first-time user main-frame capabilities in smaller computers. CAM.FIVE.S teaches APT programming, allows each user to program and verify parts for any NC/CNC machines/control combination, and covers nonanalytical, 3-dimensional, and sculptured and conventional geometric surfaces. The package includes CAM.CAL2 — Advanced APT Graphics Tutorial, CAM.APT.SURF — 5-Axis APT Processor with Sculptured Surfaces,

CAM.POST — Interactive Postprocessor Generator, **CAM.PLOT** — Tool Path Graphic Plotter, and **CAM.PUNCH** — Reverse/Conventional Punch Processor.

A version of this product is available for the PDP-11 computer.

Price: \$22,445 — \$37,592

Contact: John J. Nassr
(514) 697-8033

ICAM TECHNOLOGIES CORP.
1900 Sources Boulevard
Pointe Claire, Quebec H9R 4Z3
Canada

CAM.PLOT — Tool Path Graphic Plotter

Operating System: MicroVMS, VMS

Keywords: • CAD/CAM • Computer-aided instruction
• Mechanical engineering • Numerical control

Memory required: 512KB.

This system, written in FORTRAN, allows the user to easily verify the accuracy and to conduct a complete analysis of the program's feed rates, geometry, and motions, reducing the cost of testing the parts before N/C production. The user views the tool motions generated by the APT program or CAD/CAM system with dynamic color graphic plots in different modes. Full pan and zoom graphics capabilities highlight the visibility of very intricate motions for the most complex parts. In many applications, CAM.PLOT eliminates the need for hard-copy plotters. Those plotters can be produced during the plotting process if required.

A version of this product is available for the PDP-11 computer.

Price: \$2250 — \$3375

Contact: John J. Nassr
(514) 697-8033

ICAM TECHNOLOGIES CORP.
1900 Sources Boulevard
Pointe Claire, Quebec H9R 4Z3
Canada

CAM.POST — Interactive Postprocessor Generator

Operating System: MicroVMS, VMS

Keywords: • CAD/CAM • Numerical control
• Pre- and postprocessors • Programming tools

Memory required: 1MB.

CAM.POST, written in FORTRAN, enables unskilled users to efficiently produce, modify, and maintain postprocessors for most NC/CNC machine tool/control combination, from lathes to 5-axis continuous-path machines. CAM.POST is fully compatible with ISO 3592

CL data format and ISO 4343 postprocessor command language. This package can be used with any CAD/CAM system that provides a standard CL file data. End users quickly and economically create and update their own postprocessors.

A version of this product is available for the PDP-11 computer.

Price: \$12,000 - \$20,000

Contact: John J. Nassr

(514) 697-8033

ICAM TECHNOLOGIES CORP.

1900 Sources Boulevard

Pointe Claire, Quebec H9R 4Z3

Canada

CAM.PUNCH — Reverse/Conventional Punch Processor

Operating System: MicroVMS, VMS

Keywords: • CAD/CAM • Mechanical engineering
• Numerical control • Programming tools

Memory required: 100KB.

This flexible N/C tape processing and management system, written in FORTRAN, offers ASCII and EIA conversion features and a powerful editor permitting manual tape editing. The unique reverse-punching sequence capability is a time-saving and safety feature eliminating otherwise mandatory tape rewinding. CAM.PUNCH offers direct access to a main library containing tapes generated by the system as well as tapes foreign to the system, which may be read into the library through the tape reader.

A version of this product is available for the PDP-11 computer.

Price: \$1688 - \$2344

Contact: John J. Nassr

(514) 697-8033

ICAM TECHNOLOGIES CORP.

1900 Sources Boulevard

Pointe Claire, Quebec H9R 4Z3

Canada

CBS (Cut-Bun-Sew Garment Manufacturing System)

Operating System: VMS

Keywords: • Inventory • Process control • Production control
• Textiles/clothing

This multiterminal multitasking garment manufacturing system consists of major systems to provide production control and fabric status for the cut and sew operator. The systems, designed to be installed individually and as an integrated package, interface with other accounting, order entry, inventory, and payroll systems.

- The Cut System module, for fast, accurate entry of a cutting order, allows both menu inquiry and printed reports of cuts entered by cut number and cut status. This system also provides timely and accurate data, leading to more efficient use of plant capacity.
- The Fabric System module maintains a constant status of fabric received, issued, cut, on order, available to issue, and on hand by manufacturer, description, design, and color. Information is available through menu inquiry.
- The Style Standardization System module provides the manufacturer with a standard method of manufacturing a particular item. The module allows the user to enter and formulate time study and engineering data for each manufacturing operation. Menu inquiry of the style master file and various reports provide data to control costs, such as the Direct Labor Report by Style.
- The Marker System module keeps an active inventory of each marker in house by style and model.
- The Bundle System module allows production control to input the request from the spread and cut department for bundle tickets by category and special instruction.

Options for CBS include Piece Pay System, Standard to Actual Production, Actual Salary Paid versus Production Salary Achieved, Machine Down Time, Quality Control versus Production Efficiency, and Marker Efficiency.

Other optional modules are General Ledger, Accounts Payable, Accounts Receivable, Inventory Control, Order Entry/Invoicing, and Payroll.

A version of this product is available for the PDP-11 computer.

Price: \$10,000 - \$12,500

Contact: Jim Baker, President
(404) 256-3067

AMERICAN DIGITAL PRODUCTS CORP.
5775B Glenridge Drive, Suite 320
Atlanta, GA 30083

CentrePLAN

Operating System: VMS

Keywords: • CAD/CAM • Production control
• Project management

Memory required: 4MB.

CentrePLAN's interactive facilities enable a process planner to construct plans, estimates, routing instructions, and tooling lists for an unlimited range of products and processes, including component manufacture and assembly operations. Each company's standard data (text and formulas) can be entered and stored to provide rapid recall and execution and to produce operation lists and time estimates. Completed process plans can be stored on the data base and later retrieved

for modification. This system enables a company to reduce manufacturing lead time by improving the efficiency of the planning department, producing reliable and consistent planning information, using standard company data, automatically generating production planning documentation, and providing a direct link to production control systems (MRP-11).

Our distributor in North America is American Channels Inc., 17 North Street, Lexington, MA 02173.

Price: Available upon request

Contact: Dick Francis
(0223) 314848

CADCENTRE LTD.
High Cross, Madingley Road
Cambridge CB3 0HB
England

CIMCO Interactive APT (Automatically Programmed Tools)

Operating System: VMS

Keywords: • CAD/CAM • Graphics • Numerical control

This complete multiuser system produces accurate, cost-effective tapes for all types of NC machine tools and optimizes the process from print to finished part. APT is an English-like computer language designed to simplify tape preparation. Extremely powerful yet easy to learn and use, APT is a popular part-programming language. IAPT offers on-line error correction, graphics display of geometry and of the cutter path and tool shapes, storage and retrieval of geometric definitions, and the examination of the standard CL file before postprocessing.

A lathe module is available to provide a convenient means of describing tool motion for typical lathe roughing and threading operations. Also available is the generalized postprocessor, which helps keep overall system costs down and frees the user from dependence on outside vendors for custom software, and a backplotting package, which accepts existing punched tapes or tape images on diskettes and plots the resulting tool paths.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Ron Hunt
(214) 655-8930

COMPUTER INTEGRATED MANUFACTURING CO.
1930 Hi Line Drive
Dallas, TX 75207

CMI PROFIT

Operating System: VMS

Keywords: • Financial planning • Inventory
• Production control • Shop floor control

CMI PROFIT is a complete, user-friendly on-line interactive closed-loop MRP II manufacturing system as described by APICS. The program is fully integrated with its own accounting/distribution system and is used by more than 350 firms in various manufacturing disciplines. The package features:

- Financial planning for budgeting, production planning, and sales forecasting
- Manufacturing planning for master scheduling, material requirements planning (regenerative or net change), capacity requirements planning, and rough-cut capacity planning
- Manufacturing control for work orders, labor reporting, material reporting, routings, and net material requirements
- Engineering control for single, multilevel, and same-as-except-for bill of materials and new-product estimating
- Inventory control (multilocation) for purchase order processing, inventory average costing, inventory analysis, and physical inventory
- Sales control for sales order processing, sales analysis, and customer service
- Manufacturing costing for work order costing and work order budget reporting
- Accounting control for customer billing, accounts receivable, accounts payable, payroll, and general ledger

A version of this product is available for the PDP-11 computer.

Price: \$20,000 – \$60,000

Contact: Ken F. Sellers, Jr.
(414) 327-7560

SYSTEMS FOR PROFIT INC,
10335 W. Oklahoma Avenue
Milwaukee, WI 53227

CMR21 Host Utility

Operating System: VMS

Keywords: • Communications • Device drivers/handlers
• Programming tools • Project management

This library of RSX-11/VMS utility programs assists users of CMR21 distributed industrial control processors in configuring and supporting networks of CMR21 units. This utility is not required to operate the CMR21. However, in applications that have many CMR21 processors distributed over a wide area, the utility provides a convenient set of nonprivileged executable tasks to determine network configuration and to access individual processors in the network.

The CMR21 Host Utility is compatible with VAX/VMS and PDP-11/RSX-11. The utility supports both mapped and unmapped memory configurations and is distributed in Files-11 format.

Refer to SPD #30.39.xx when requesting further information on this product from your local DIGITAL sales office.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Consult your local DIGITAL sales office (see Introduction).

COMETS (Comprehensive On-Line Manufacturing and Engineering Tracking System)

Operating System: VMS

Keywords: • CAD/CAM • Data collection • Production control
• Shop floor control

This series of modular integrated subsystems provides a powerful decision support system for manufacturing companies. COMETS tracks material and/or collects engineering data by lot, batch, or ID number for lot- or batch-oriented process industries.

COMETS fits between existing business systems (MRP packages) and automated equipment providing extensive shop floor control. The system allows users to define and collect information on the elements that affect the manufacturing process material, equipment, specifications, environmental conditions, and operators. COMETS can verify and edit data and react with appropriate actions, such as logging warnings, sending mail messages, and even shutting down automated equipment.

The modules, written in ANSI COBOL, use standard VAX architecture and software, including VAX DBMS. The work-in-process and inventory tracking modules maintain a genealogy on the manufacturing processes. The engineering data collection and analysis modules allow engineers to collect and analyze data needed to improve yields and control rework. The costing module provides standard inventory valuation and absorption cost reports. The Non-Lot Tracking™ and facility monitoring modules allow the collection of information on entities that may affect the manufacturing process. The planning module helps planners and managers determine dispatch priorities to meet schedules and to balance production lines. Specification and factory communications modules support the electronic transfer of specifications, messages, and instructions. The process control module allows users to download recipes and to read data from lower-level microprocessors controlling automated equipment. The COMETS system is highly flexible, with table-driven parameters to allow customization.

1248 Manufacturing

Price: \$125,000 +

Contact: Dave Hanks

(415) 940-1400

CONSILIUM ASSOCIATES, INC.

1945 Charleston Road

Mountain View, CA 94043

COP (Customer Order Processing), MCBA, Inc.

Operating System: VMS

Keywords: • Billing • Distribution • Order entry
• Warehousing

COP provides 2-pass customer order entry with separate billing, integrates with MCBA's manufacturing system, and has features for distributors. COP allows on-line entry and editing of customer orders and/or credit memos, allocates line items at entry time, checks credit and availability at entry time, accepts order and/or line-item discounts at entry time, handles back orders automatically, supports distribution from multiple warehouse locations, allows selective and partial billing, supports a 10-character zip code, accepts multiple prices for each line item and mass price change, and allows product category account maintenance.

In addition, COP collects sales history automatically and prints sales history reports on request and the Products Sold by Customer and Customers by Products Sold reports. COP accepts multiple discounts for each customer on a product-line basis as well as trade discounts for each product, interfaces to five other MCBA application packages, and supports security system and multicompany capabilities.

A version of this product is available for the PDP-11 computer.

Price: \$3000 - \$4500

Contact: Sales Representative

(818) 957-2900

MCBA, INC.

2441 Honolulu Avenue

Montrose, CA 91020

Datacode® Bill of Material

Operating System: VMS

Keywords: • Bill of materials • Materials handling

Memory required: 128K minimum.

The Datacode Bill of Material, written in COBOL or RM/COBOL, can maintain product bills of material. Implosion facilities allow up to 32 levels in product structure. Maintenance procedures are performed interactively in a conversational mode and on line (add, change, or delete). The system displays a single-level parts list and a where-used list and an indented parts list and a where-used list.

The system features:

- Add Bill of Material
- Delete Bill of Material (all components of structures)
- Copy Bill of Material
- Component multisubstitution
- Structure file maintenance, single-level parts list and where used, level-by-level parts list, indented parts list, where-used and indented parts list — extended, and summarized explosion reports
- Specification permission of scrap/shrinkage
- Multicompany capability
- A stand-alone system

Price: \$9000 — \$17,000

Contact: Al K. Margis
(416) 625-1037

RAUS COMPUTER SYSTEMS LTD.
1945 Dundas Street East, Suite 213
Mississauga, Ontario L4X 2T8
Canada

Datacode® Capacity Planning

Operating System: VMS

Keywords: • Production control • Scheduling
• Shop floor control

Memory required: 128K minimum.

The Datacode Capacity Planning system, written in COBOL or RM/COBOL, enables management to plan and monitor the level of work released and planned for release to the manufacturing facility. Capacity requirements are taken from the material requirement plan for manufactured items. Setup, machine, and labor hours are calculated from data in the manufacturing data base. The infinite load for each work center is calculated by standard operation times.

The capacity requirements data developed is presented in summary (52 time buckets) or in detail and in printed format or visual displays. A capacity-planning report is provided, detailing the items and work orders that created the capacity requirement for the work center selected. That pegging is a valuable tool for production planning.

Capacity-requirement summary reports are formatted horizontally, vertically, with bar graph, with pegging report, with capacity requirement in detail, and by order type.

Price: \$5000 — \$10,000

Contact: Al K. Margis
(416) 625-1037

RAUS COMPUTER SYSTEMS LTD.
1945 Dundas Street East, Suite 213
Mississauga, Ontario L4X 2T8
Canada

Datacode® Material Requirements Planning

Operating System: VMS

Keywords: • Bill of materials • Inventory • Purchasing
• Shop floor control

Memory required: 128K minimum.

The Datacode Material Requirements Planning system, written in COBOL or RM/COBOL, effectively monitors and controls the purchased and manufactured materials needed to meet demand. Independent demand is specified through the Master Schedule procedures. Demand from actual sales integrates with the Order Entry module or is input through the Master Schedule procedures. Demand can be specified for up to 52 weekly periods. Customer orders, forecasted demand, and revised demand are identified for each item scheduled.

From that time-phased independent demand in the Master Schedule, the MRP system calculates requirements for subassemblies, components, and raw materials. Gross requirements are netted against on-hand, scheduled receipts, and work in process. Net requirement detail for each item is calculated and time phased by the lead time and kept in a "bucketless" manner, by shop calendar day. Time-phased requirements are reported in summary for 52 weekly periods and in detail by specific date. An MRP action report highlights exception conditions encountered in the MRP generation. Requirements for each item are pegged one level up (where used) and one level down (components). Reports and displays with pegging show order, customer, and parent-item references, providing management with full visibility of all items and orders creating demand on components, as well as the sources of demand on components.

Price: \$9000 - \$17,000

Contact: Al K. Margis
(416) 625-1037

RAUS COMPUTER SYSTEMS LTD.

1945 Dundas Street East, Suite 213

Mississauga, Ontario L4X 2T8

Canada

Datacode® Standard and Current Costing

Operating System: VMS

Keywords: • Cost accounting

Memory required: 128K minimum.

The Datacode Standard and Current Costing subsystem, written in COBOL or RM/COBOL, provides the automatic buildup for standard and current material and for labor and overhead costs from Bill of Material. That procedure is done as required for new products and annually to replace standard costs with current costs. Procedures are

provided to calculate current product costs monthly. Complete cost information for products is available visually (on line) and in printed report form in single-level or indented format.

The system features:

- Cost calculations for labor — annual standard daily and monthly current cost
- Reports for standard cost parts list, standard cost breakdown, current cost parts list, current cost breakdown, standard cost listing, and monthly current cost
- On line: standard cost parts list, standard cost breakdown, current cost parts list, and current cost breakdown

Price: \$5000 — \$10,000

Contact: Al K. Margis
(416) 625-1037

RAUS COMPUTER SYSTEMS LTD.
1945 Dundas Street East, Suite 213
Mississauga, Ontario L4X 2T8
Canada

Datacode® Standard Routing

Operating System: VMS

Keywords: • Production control • Shop floor control

Memory required: 128K minimum.

The Datacode Standard Routing system, written in COBOL or RM/COBOL, has facilities for maintenance of manufacturing routings or operation sheets, operation description, and work centers. Each work center may be linked to a parent work center to form a reporting structure of the production resources. Labor and overhead rates are identified at the work-center level.

The files are used with the Bill of Material and Costing files to provide the manufacturing data base used for Datacode manufacturing resource planning (Master Production Schedule and Rough Cut Capacity Planning, Capacity Planning, Material Requirements Planning, and Work in Process).

Interactive procedures are offered to maintain routings (add, change, or delete operation data), to delete complete routings, and to copy/modify routings.

Price: \$5000 — \$10,000

Contact: Al K. Margis
(416) 625-1037

RAUS COMPUTER SYSTEMS LTD.
1945 Dundas Street East, Suite 213
Mississauga, Ontario L4X 2T8
Canada

Datacode® Work in Process

Operating System: VMS

Keywords: • Cost accounting • Production control
• Shop floor control

Memory required: 128K minimum.

This system, written in COBOL or RM/COBOL, provides manufacturing companies with work order accounting, reporting, and analysis capabilities. Work orders are entered through CRT and/or created automatically from the Datacode Order Entry system. From the work order creation procedures, work orders, material requisitions, operation sheets, and work order registers are printed. A work order maintenance procedure allows changes to be made to open work orders.

The system integrates with the standard Datacode Bill of Material, Work Center, Routing, and Operations subsystems for use in a make-for-inventory environment. For custom manufacturing, work center, operation, and material specification capabilities are provided. The Work in Process system also integrates with the Material Requirements Planning system.

Procedures are supplied to enter daily labor and material transactions, as well as work order completion information. Entry is through CRT, and on-line editing, validating, and updating take place. Audit and management reports are provided for labor, material, production, and work order activity.

Work order status may be printed or visually displayed at any time. Capacity-use and material-allocation reports are available. Detailed work order cost analysis is provided for in-process and completed work orders.

Price: \$9000 – \$17,000

Contact: Al K. Margis
(416) 625-1037

RAUS COMPUTER SYSTEMS LTD.

1945 Dundas Street East, Suite 213

Mississauga, Ontario L4X 2T8

Canada

Datapparel System 12

Operating System: VMS

Keywords: • Inventory • Order entry • Production control
• Textiles/clothing

Written in COBOL, this system serves men's clothiers and apparel companies with coordinate requirements. Fabric allocation; automatic cut plan generation; fabric inventory by aisle, row, and bin; and garment ticketing and labeling are just a few of the features of System 12.

Price: \$125,000 – \$250,000

Contact: Scot Siegel

(213) 645-9061

DATAPPAREL, INC.

6101 W. Centinela Avenue, Suite 330

Culver City, CA 90230

Datapparel System 21

Operating System: VMS

Keywords: • Information management • Inventory
• Order entry • Textiles/clothing

Written in COBOL for VAX 32-bit superminicomputers and the VAX 8600, this comprehensive manufacturing system serves the larger apparel manufacturer and/or importer. System 21 features up to 18 size capabilities, bulk and nonmerchandise invoicing, order contract and raw materials contract files, factory status of WIP, and a complete costing subsystem. The system also reports market performance and forecasts style, color, and size by period. Warehouse and cut numbers, stop and start dates, and comments may be entered at order entry. The system generates allocations for WIP, fabric, and finished-goods inventory.

Price: \$125,000 – \$250,000

Contact: Scot Siegel

(213) 645-9061

DATAPPAREL, INC.

6101 W. Centinela Avenue, Suite 330

Culver City, CA 90230

DNC-11 (Direct Numerical Control Package)

Operating System: VMS

Keywords: • CAD/CAM • Materials handling
• Numerical control • Shop floor control

DNC-11, a part program distribution system for the manufacturing market, provides a direct link between the CAD/CAM environment and numerically controlled (NC/CNC) machines on the shop floor. DNC-11 eliminates generating NC programs on paper tapes that are then manually transported to the NC/CNC machine level. The result is faster design to production and elimination of most problems encountered with paper tapes.

The system runs under RSX-11M and VMS and can comprise two or three levels:

- Host system: For part program storage, command interpretation, logging, communication with remote mainframes, and optionally for CAD/CAM or program development.
- Subsystem: For program distribution; in smaller applications, this software can run on the host system.

- Machine connection level: Three methods are possible.

BTR technique (Behind Tape Reader): The paper tape reader on the NC/CNC machine is replaced by a microprocessor-based BTR interface available from DIGITAL. Firmware emulates the tape reader to control the machine. Connection is by means of an optically isolated parallel port and uses an error-free communication protocol.

CTE terminal: Based on the VT103 or RT103, this terminal provides for local storage and editing of part programs as well as machine feeding control. Connection is through a serial line to the BTR interface.

Direct communication: For CNC machines that have an error-free protocol implemented.

A version of this product is available for the PDP-11 computer.

Price: \$15,000

Contact: Consult your local European DIGITAL sales office or call 49-89-95910.

DNC (Distributed Numerical Control)

Operating System: VMS

Keywords: • Numerical control • Production control
• Shop floor control

This program, distributing NC part programs to machine tool controllers, serves the middle level of a 3-level hierarchy. NC program files are exchanged with a large (mainframe) computer on the top level while individual jobs are scheduled and their corresponding NC programs down-loaded to machine tool controllers at the bottom level. The system also allows for development of new NC programs or modification of existing NC programs. Files of active NC programs are maintained within the DNC system.

The DNC system improves productivity for machine shops using NC and/or CNC controllers by eliminating paper tapes and their problems from the shop floor, as well as paper tape readers and punches from normal operations; reducing set-up time between jobs by the use of job queues for part programs on disk, which are quickly down-loaded upon operator request; automatically collecting job statistics, such as run times, down times, efficiencies, piece counts, and tool changes; automatically updating NC part programs after changes have been made by the operator and/or part programmer; using passwords for security; simultaneously part programming on the DNC minicomputer and other operations if no mainframe computer is available; supervising many machine tools by a single DNC minicomputer through simple (twisted-pair) wiring; completing current jobs, using buffer memories in the CNC, starting new jobs with the paper tape readers; and automatically checking all file transfers for errors.

A version of this product is available for the PDP-11 computer.

Price: \$20,000 – \$50,000

Contact: William P. Jenney, President
(716) 668-1606

JENNEY SYSTEMS ASSOCIATES, LTD.
2618 Union Road
Buffalo, NY 14227

ENHANSYS

Operating System: VMS

Keywords: • Data conversion • Decision support • Networking
• Statistics

Memory required: 4MB. Distribution medium: magnetic tape.

ENHANSYS, written in FORTRAN-77, supports professional decision making and problem solving by providing access to data residing on incompatible systems. Once the data has been acquired, ENHANSYS provides powerful tools to manipulate and analyze the acquired data and to graphically present the results.

The system features transparent, global access to data residing on IBM, Tandem, or H-P systems using noncompatible data base management systems and file structures. Professionals can access data by asking for it by name. ENHANSYS determines where the data resides and what access protocols/formatting requirements are needed. Powerful data-manipulation capabilities, inquiry and reporting, math/statistical analysis tools, and graphics are then available to the user through an integrated natural-language interface. With its modular structure and open architecture, the system easily incorporates additional functionality and operates in conjunction with other software packages. In addition, ENHANSYS provides educational and consulting services to aid customers in maximizing productivity improvements.

Price: \$7500 – \$75,000

Contact: John Lipp
(408) 255-2920

ENHANSYS
20111 Stevens Creek Boulevard
Cupertino, CA 95014

EQUINOX™

Operating System: VMS

Keywords: • CAD/CAM • Graphics • Menu handlers

This computer-aided drafting software combines the simplicity of computer graphics with powerful drafting features. Drawings can be quickly created, stored, recalled, and edited. A unique menu approach guides the user through logical sequences to create geometry and to perform other visual operations such as in-process drawings, set-up sheets, and tooling sheets. Dimensions are automatically drawn with

arrowheads and text, showing precise measurement between selected drawing elements. Other key features include layering and cross-hatching. Commonly used shapes can be defined once and used in multiple drawings.

The system also offers a menu-driven NC graphics package. Users may incorporate their own machining methods or allow EQUINOX to apply efficient techniques. The package features automatic routines such as lathe roughing, lathe grooving, mill contouring optimization, and clamp avoidance. Users may view the in-process parts of machine-tool coordinate systems through machining simulation. NC graphics is compatible with COMPACT II, which allows the program to interface with other CAD systems; enables COMPACT II programs to be read into the EQUINOX systems; and allows graphics to be used efficiently and transported.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Thomas J. Schaefer, Director of Marketing
(313) 995-6000

MANUFACTURING DATA SYSTEMS INC.
4251 Plymouth Road, P.O. Box 986
Ann Arbor, MI 48106

EUCLID

Operating System: VMS

Keywords: • CAD/CAM • Graphics • Simulation

EUCLID is a complete CAD/CAM software package based on solids modeling techniques.

Price: \$75,000 - \$250,000

Contact: Miguel M. Suarez
(617) 229-2630

MATRA DATAVISION INC.
99 S. Bedford Street
Burlington, MA 01803

FINCON (Financial Control System)

Operating System: VMS

Keywords: • Accounting • Inventory • Order entry
• Real time

FINCON is a real-time system designed to be fully integrated into any of the modules of IMPCON (Production Control/Manufacturing), if desired. FINCON contains sales, purchase, and nominal ledgers, as well as optional sales order entry and stock control modules. FINCON can be installed on a modular basis. Additionally, interfacing to PAYSOLVE (Payroll) will be available.

A version of this product is available for the PDP-11 computer.

Price: £3000 – £12,000

Contact: M. J. Bradley, Sales and Marketing Manager
0905 53335

STAVELEY COMPUTING

Blackpole Road

Worcester WR3 8TH

United Kingdom

FMRP (Full Material Requirements Planning)

Operating System: VMS

Keywords: • Materials handling

This MCBA system provides all the features of Base MRP, highlights exceptions, recommends shop order releases, supports multiple-order policies, provides pegging, recommends purchase order releases, accommodates what-if operations, and is the key to successfully implementing manufacturing resource planning.

Application Development and Enhancements, Inc., is a New England distributor of software products manufactured by Mini-Computer Business Applications, Inc. (MCBA), in Montrose, California.

A version of this product is available for the PDP-11 computer.

Price: \$2000 – \$6000

Contact: Marianne Chester
(617) 938-1979

APPLICATION DEVELOPMENT AND
ENHANCEMENTS, INC.

29-B Montvale Avenue

Woburn, MA 01801

FORAN

Operating System: VMS

Keywords: • CAD/CAM • Data base management
• Materials handling • Pre- and postprocessors

Memory required: 1MB.

This integrated computer-aided system for designing and manufacturing ships can interactively generate intrinsically faired hull forms, using an analytical definition of the hull surface. The multiaccess, relational data base stores topology and 3-D information of the ship's geometry.

The FORAN System, written in FORTRAN-77, is composed of three subsystems that use a common data base:

- The Design Subsystem, which defines the hull, decks, and bulkheads, features interactive generation and fitting of hull forms, naval architecture calculations, and preliminary and definitive designs.

- The Production Subsystem covers the fabrication stages: definition of the geometry and topology of the hull structure and bill of materials and data for planning and production control. Manufacturing data includes profiles bending, plates forming, jigs, optical or numerical control for 2- or 3-axis cutting, and more.
- The Drafting Subsystem produces integrated drawings, such as general arrangements, steel classification, detailed construction, and more. This subsystem can also be used stand alone for general drafting. The basic software for graphics is the International Standard GKS, which makes the software graphics-device independent.

The license includes delivery of computer programs (object or source), implementation in the licensee's computing center, documentation and training, and maintenance and support from Senermar Madrid offices.

Price: \$30,000 – \$300,000

Contact: L. Garcia

(1) 456-6415

SENER SISTEMAS MARINOS S.A.

Raimundo Fernandez Villaverde, 65

Madrid 28003

Spain

GECAPP-Plus (General Electric's Computer-Aided Process Planning)

Operating System: VMS

Keywords: • Mechanical engineering • Process control
• Production control

This system is used for such manufacturing applications as discrete parts machining, electronics assembly, tooling fabrication, sheet metal fabrication, weldment fabrication, general assembly, and more. This expandable system reduces paperwork, eliminates duplication of efforts, shortens planning cycles, and standardizes tooling and part-family scheduling.

GECAPP-Plus lets you interact with a sophisticated data base to create and manipulate process plans. You can design process plan formats, create plans, create and use a knowledge base for generative planning, classify and code plans, store them in logical groups for easy retrieval and modification, and copy plans and create similar ones. The graphics feature lets you create, integrate, and transfer graphics. You may also analyze part-design data and cell design, optimize machine use and machining parameters, and generate time standards.

The baseline system modules let you create, store, and retrieve plans.

Price: Available upon request

Contact: Richard Hayden

(518) 471-4787

GENERAL ELECTRIC CO.

12 Corporate Woods Boulevard

Albany, NY 12211-2394

GNC (Graphical Numerical Control) System

Operating System: MicroVMS, VMS

Keywords: • CAD/CAM • Mechanical engineering
• Numerical control • Simulation

GNC can produce programs for all the major numerically controlled machine-tool processes, such as milling, turning, flame cutting, electrical discharge machining, wire erosion, water jet and laser cutting, and nibbling/punching. The milling capability can accommodate 2½- and 3-dimensional surface-machining tasks, including those requiring movement in as many as five axes.

GNC can also produce operation sheets for use on the shop floor and can provide plotted displays of a particular work piece or stages in the machining process. In addition to specifying machining sequences, the system can be used to create component shapes that can equal the performance of many dedicated drafting systems. Alternatively, shapes accepted from other drafting systems can be amended and adapted within GNC.

Simple commands are used to define individual tool movements. The resulting sequence of movements is visualized in an animated graphics simulation of the machining process, providing instant identification of problems. Incorrect movements can be edited, without having to redefine the whole sequence; alternative strategies can be tried and the animation repeated until the desired results are achieved. Only when the sequence is correct does the system produce the tape output for control of the particular machine tool.

Our distributor in North America is American Channels Inc., 17 North Street, Lexington, MA 02173.

Price: Available upon request

Contact: Mike Crow

(0223) 314848

CADCENTRE LTD.

High Cross, Madingley Road

Cambridge CB3 0HB

England

H-BOMM

Operating System: ULTRIX-32, UNIX* (System III, System V)

Keywords: • Decision support • Forecasting • Management

Helmsman's bills of material management system provides a product structure management tool for planning, control, and decision making. Its features and spreadsheet capabilities make H-BOMM the ideal what-if planning tool. H-BOMM integrates with other Helmsman products to form a material requirements planning package, H-MRP. As the nucleus of Helmsman's material requirements planning system, H-BOMM supports a complete and classic demand-dependent MRP system, a system for small manufacturers.

As a desk-top computer tool linked to a large-scale computer, H-BOMM can receive and operate on portions of a company's product structure data base. H-BOMM users can perform complex operations not available on a large computer system, and no programming skills are required.

Operating on a micro, H-BOMM exceeds the features and functions of mainframe and minicomputer software. With the support of H-CHAMP and operating in a work station connected with a mainframe, H-BOMM is the manufacturing and engineering manager's equivalent of the financial manager's spreadsheet tool.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$2495

Contact: Lew Silverstein
(408) 246-8300

HELMSMAN SYSTEMS, INC.
1030 S. Winchester, Suite 205
San Jose, CA 95128

H-BUY

Operating System: ULTRIX-32, UNIX* (System III, System V)

Keywords: • Order entry • Process control • Purchasing
• Quality control

H-BUY, an on-line interactive system, provides purchasing and receiving management for manufacturing operations. H-BUY integrates with other Helmsman products to form a material requirements planning package, H-MRP.

H-BUY's Purchasing function group enters, tracks, and controls open purchase orders and provides on-line status and historical information. Reducing the buyer's clerical effort allows more time to control the cost and adverse variance of material and to evaluate the delivery performance of the vendor. By treating purchased material as "good parts on hand" only when it has passed inspection and is in Stores, the

Purchasing group more accurately monitors the arrival and quality of vendor items. A user-controlled report generator is included in the function group.

The Vendor function group establishes and controls the vendor-to-part relationship. By tracking the vendor's history and commitments, the group of programs establishes which vendors best meet an organization's needs.

A well-run Receiving function controls vendors more efficiently, regulates the flow of material, and raises the level of service.

The Receiving function group tracks and controls material and provides on-line status and historical information. By matching purchase order and receiving information, the system ensures payment only for good material in the specified quantity. Because the system flags back-ordered material, expedition begins as soon as needed material arrives.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$2495

Contact: Lew Silverstein
(408) 246-8300

HELMSMAN SYSTEMS, INC.
1030 S. Winchester, Suite 205
San Jose, CA 95128

H-MAKE

Operating System: ULTRIX-32, UNIX* (System III, System V)

Keywords: • Process control • Production control
• Project management • Shop floor control

This on-line interactive system provides work-in-process management for manufacturing operations. H-MAKE integrates with other Helmsman products to form a material requirements planning package, H-MRP.

Work-in-process tracking is the cornerstone of closed-loop MRP. H-MAKE allows production and production control to make the decisions, to set the priorities, and to meet the order schedules. Reliable, consistent performance directly influences lower investment in finished goods inventory and better customer service.

The Work Order function group enters, tracks, and updates work orders; provides on-line work-in-process status information; and includes a user-controlled report generator, tied to work order number or part number. Paperwork packets including kit pull lists are generated for each job. The system ties back-order item detail to work order and makes the information available on line. Delays and splits are possible. Work orders are tied to and controlled by due date.

The Work Center and Route function groups establish and update work center and routing information. The Route group provides a report generator that ties work center to work order information. Those reports give the shop supervisor an information base for close-in scheduling and dispatching.

Flexible, quick-reacting production control planning requires you to perform what-if simulated kit pulls. The Kitting function group has two what-if simulated kit pull tools that let you answer the question "Can this kit or set of kits be pulled now?"

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$1495

Contact: Lew Silverstein
(408) 246-8300

HELMSMAN SYSTEMS, INC.
1030 S. Winchester, Suite 205
San Jose, CA 95128

H-MRP

Operating System: ULTRIX-32, UNIX* (System III, System V)

Keywords: • Bill of materials • Inventory • Purchasing
• Shop floor control

H-MRP, a material requirements planning package, incorporates the classic MRP concepts. H-MRP is an on-line, demand-dependent, transaction-driven, net-change system. The H-MRP package includes H-CHAMP, applications environment; H-BOMM, bills of material manager; H-STORE, inventory management and stores; H-MAKE, work-in-process management; H-BUY, purchasing and receiving; H-PLAN/M, master schedule and planner controls; and MRP.

H-MRP integrates with other suppliers' application software packages supporting the needs of manufacturing company users. For instance, the H-CHAMP tools can be used to integrate the H-MRP modules with presently installed accounting or sales and forecasting packages.

H-MRP runs on the de facto standard operating systems for 8080/8085/Z80, 8086/8088, Z8000, and 68000 families of hardware.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$9995

Contact: Lew Silverstein
(408) 246-8300

HELMSMAN SYSTEMS, INC.
1030 S. Winchester, Suite 205
San Jose, CA 95128

H-PLAN/M

Operating System: ULTRIX-32, UNIX* (System III, System V)

Keywords: • Inventory • Process control • Production control
• Scheduling

H-PLAN/M is an on-line interactive system providing master schedule and planner controls and MRP for manufacturing operations. The system integrates with other Helmsman products to form a material requirements planning package, H-MRP.

The Material Requirements Planning function group provides the time-phased, net requirements for each item; the group compares independent demand from the master schedule and dependent demand from the BOM explosion to the on-hand inventories and open purchase and work order status. This group also enables you to control MRP rules. Choose between regenerative or true transaction-driven net change rules. An on-line MRP inquiry initiates a single-level MRP updated display for that item for current information. The MRP is "full-pegging." The MRP function group also includes what-if simulation, a powerful tool for making management decisions.

The Master Schedule affects customer-order service and inventory-investment levels. This group drives the MRP System with product requirements by date, quantity, and configuration. The group compares forecast and sales order information to the production plan and recommends where to adjust the master schedule. Included is a rapid-response, rough-cut capacity planning tool, in addition to top-down, what-if simulation.

The Planner Control function group enhances system effectiveness by apportioning and delegating system activities to designated individuals. This group enables you to control all aspects of the inventory rules that affect each of the parts in the system data base. You can choose order point or MRP control, internal and safety lead time, safety stock, and order quantity rules. The group includes an extensive user-controlled report generator.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$2495

Contact: Lew Silverstein
(408) 246-8300

HELMSMAN SYSTEMS, INC.
1030 S. Winchester, Suite 205
San Jose, CA 95128

H-STORE

Operating System: ULTRIX-32, UNIX* (System III, System V)

Keywords: • Distribution • Inventory

H-STORE, an on-line interactive system, provides inventory and stores management for manufacturing operations. The system integrates with other Helmsman products to form a material requirements planning package, H-MRP.

The Stores group provides a perpetual on-line inventory record, maintained by inventory personnel. You can trace data base transactions to the source document and to the responsible operator. The system includes a user-controlled report generator.

The Charge Number and Month-End function groups provide inventory and WIP transaction interfaces to the financial and accounting functions. The groups also detail and summarize the current month's system transactions. The references to source documents and operators help management review and edit that information before transferring it to the general ledger accounts. Dual tracking and a user-controlled report generator are included.

The Back-Order function group tracks and reports back-order status and issues and includes a user-controlled report generator. By flagging relevant inquiries and reports, the system helps to expedite back orders, both at the vendor's plant and in house.

The Cycle Count function group statistically measures Stores' accuracy and continually adjusts physical-to-book inventory.

The Physical Inventory function group controls the source documents for the classic, audited, and physical inventories and processes the approved physical-to-book inventory adjustments that follow.

The Planner Control group provides history-oriented inventory control, item classification, lot size, EOQ, safety stock, and order point. Those functions do not depend on bills of material or material requirements planning. The function group also includes a user-controlled report generator.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$2495

Contact: Lew Silverstein
(408) 246-8300

HELMSMAN SYSTEMS, INC.
1030 S. Winchester, Suite 205
San Jose, CA 95128

HS/LP (Linear Programming)

Operating System: VMS

Keywords: • Decision support • Mathematics
• Programming tools • Simulation

HS/LP can solve large-scale linear programming problems. HS/LP provides solutions that optimize a linear objective function over a set of activities that are restricted by linear constraints. The system includes optimization and parameterization modules as well as utility modules for problem updating and maintenance. An optional Mixed Integer Programming extension is available. HS/LP can handle models of up to 8192 equations (constraints) and 16,384 variables (activities).

Input data is accepted in the industry-standard MPS format. Results are available in tabulated form or in filed format for convenient access by high-level languages, including the OMNI modeling language. An easy-to-learn control language allows automatic branching, based on current problem status and conditions.

Linear Programming, a general-purpose optimization technique, is widely used as a decision planning tool in the petroleum, chemical, wood products, energy, steel, and food processing industries. Typical applications for HS/LP include finding optimal strategies for raw material selection, resource allocation, blending, and distribution.

Price: \$5880 - \$12,800

Contact: George Macdonald
(201) 627-1424

HAVERLY SYSTEMS INC.
78 Broadway, P.O. Box 919
Denville, NJ 07834

HYBRIDLO (CAD/CAM Software Package for Hybrid Circuit Layout)

Operating System: VAX DSM, VMS

Keywords: • CAD/CAM • Electrical • Electronic • Graphics

HYBRIDLO is a CAD/CAM software package for designing and manufacturing masks for integrated circuits. The package features extensive on-line design and editing capability; parametric cells; built-in pick a menu; user-definable fill density; total number of definable points equal to 10^{14} ; true zoom/pan to any magnification; user definition of named cells and their subsequent manipulation as single entities; automatic documentation files creation in which session dialog is preserved in instruction files and graphics information is saved in drawing files; continuous display when desired of digitizing grid points, center coordinates, resolution, and scale; built-in arc and alphanumerics; on-line CAM check; and true display of final artwork.

Built-in BASIC-like commands allow the user to define his/her design rule. For example, the commands multiple step and repeat, rotation, mirror reflection, and others allow the user to add, modify, and measure features. Plus, a powerful cut command removes features within specified boundaries that belong to a subset chosen from 28 levels or colors.

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Options include a hard-copy unit to dump graphics/text information from screen, a data tablet, a modem, a drum plotter, color graphics/text display, a digitizer, a color printer/plotter, and a camera.

A version of this product is available for the PDP-11 computer.

Price: \$4000 - \$40,000

Contact: Park Y. Lee, President
(617) 891-8961

CTEX, INC.

366-5 Elliot Street
Newton, MA 02164

I-Manufacturer

Operating System: ULTRIX-32, VMS

Keywords: • Accounting • Inventory • Order entry
• Query facilities

The I-Manufacturer package consists of the following modules: Production Planning and Forecasting, Customer Order Entry and Servicing, Master Production Scheduling, Capacity Planning, Inventory Management, Material Requirements Planning, Shop Order Control and Work-in-Process, Product and Engineering Data Management, Purchasing, Costing, Invoicing, Sales Analysis, Accounts Receivable, Accounts Payable, and General Ledger. Modules are integrated with a fourth-generation DBMS and with full ad hoc query capability. Modules can be added as required. Data entry screens and reports can be customized. Complete training, implementation, and support programs are offered.

Price: \$20,000 - \$40,000

Contact: Ray Talwar
(416) 248-9494

INFO-POWER SOFTWARE CORP.

557 Dixon Road, Suite 110
Rexdale, Ontario M9W 1H7
Canada

ILS-11 (Interactive Layout Software)

Operating System: VMS

Keywords: • CAD/CAM • Graphics • Metals
• Numerical control

This CAD/CAM interactive graphics design system for fabricated metal products on all machine tools and machining centers is both CAM controlled N/C controlled. DNC cassette and punched-tape output is available. Full drafting, design, and shop drawing capabilities are included in this fast and easy-to-use software package.

Shop floor control, job estimation, word processing, and other supporting software packages are available.

A version of this product is available for the PDP-11 computer.

Price: \$10,000 – \$50,000

Contact: William Hoff
(203) 575-9300

CAM-APT, INC.
166 Railroad Hill Street
Waterbury, CT 06708

I/M (Inventory Management), MCBA, Inc.

Operating System: VMS

Keywords: • Distribution • Inventory • Report writer

This comprehensive stand-alone inventory management tool is applicable to both manufacturing and distribution inventories. The application allows multiple inventory locations, stocked and nonstocked items, warehouse transfers and issues and receipts, and purchase order entry, editing, and tracking; provides physical inventory tag support and cycle counting support; interfaces to seven other MCBA application packages; and supports security system and multicompany capabilities. I/M also prints the ABC Analysis Report, with optional update; the Usage Exceptions Report; and the Inventory Stock Status and Reordering Advice reports.

The user can clear item month-to-date fields and recalculate several averaged fields, clear item month-to-date fields only, clear item year-to-date fields, or evaluate LIFO inventory and cost rollover.

A version of this product is available for the PDP-11 computer.

Price: \$3000 – \$4500

Contact: Sales Representative
(818) 957-2900

MCBA, INC.
2441 Honolulu Avenue
Montrose, CA 91029

IMCS (Interactive Manufacturing Control Systems)

Operating System: VMS

Keywords: • Inventory • Scheduling • Shop floor control

This interactive manufacturing control system offers status, planning, and inventory control information. IMCS consists of six integrated systems:

- Interactive Inventory Management System maintains information on inventory, manufacturing orders, purchase orders, and material allocations.
- Interactive Manufacturing Standards System supports the creation, maintenance, and reporting requirements for bills of material and routings.
- Interactive Material Requirements Planning System explodes the master schedule into its component requirements and calculates net available inventory and open orders.

- Interactive Shop Floor Control System gathers information for control of work flow over a short period of time.
- Interactive Purchasing System provides the control for purchasing, receiving, and inspection, as well as the interface to the accounts payable system.
- Interactive Capacity Planning System provides a planning facility for long-range capacity needs.

A version of this product is available for the PDP-11 computer.

Price: \$30,000 +

Contact: Kim Sheridan
(602) 323-1813

INTERACTIVE INFORMATION SYSTEMS, INC.
505 N. Alvernon Way
Tucson, AZ 85711

IMCS (Inventory Management and Control System)

Operating System: VMS

Keywords: • Cost accounting • Distribution • Inventory
• Materials handling

The White Hat IMCS module helps firms to accurately control the manufacturing process, concentrating on the proper accounting of inventory. IMCS identifies all raw material, work in process, and finished-goods items. A 21-character alphanumeric item number is supported. In addition, secondary part numbers and a 35-character descriptive field are maintained. Transactions are processed through multiple on-line terminals with operator prompting or through interfaces from other systems — for example, order processing, purchasing management, or shop floor control.

Standard reporting capabilities also include inventory master lists, stock status, ABC analysis, reorder exceptions, cost impact analysis, and cycle count lists. An optional Bills of Material subsystem is available and allows for extensive parent and component accounting, as well as complete costing capability.

IMCS also interfaces with the White Hat general ledger system.

Price: Available upon request

Contact: Linda M. Dobias
(617) 933-3780

WHITE HAT SYSTEMS, INC.
331 Montvale Avenue
Woburn, MA 01801

IMPCON (Inventory Management and Production Control System)

Operating System: VMS

Keywords: • Bill of materials • Inventory • Production control
• Purchasing

This completely integrated real-time system for manufacturers can be integrated into any of the modules of FINCON (Financial Control), if desired. IMPCON offers parts control, stock location control, movements inwards/outwards, purchase ordering and control, work orders, costing, bills of material, material requirements planning, work in progress, and production planning/forecasting. The system can be installed on a modular basis. Additionally, interfacing to PAYSOLVE (Payroll) will be available.

A version of this product is available for the PDP-11 computer.

Price: £5000 – £20,000

Contact: M. J. Bradley, Sales and Marketing Manager
0905 53335

STAVELEY COMPUTING
Blackpole Road
Worcester WR3 8TH
United Kingdom

INFOR/PAC

Operating System: VMS

Keywords: • Chemical • Inventory • Production control
• Textiles/clothing

INFOR/PAC is an inventory and production-control package for batch processing. The program serves the textile dying and printing, paint and coatings, plastics compounding, ink and printing, cosmetics, and specialty chemicals industries.

A version of this product is available for the PDP-11 computer.

Price: \$10,000 – \$50,000

Contact: Norman Uress
(609) 924-2189

APPLIED COLOR SYSTEMS, INC.
P.O. Box 5800
Princeton, NJ 08858

Integrated Manufacturing and Financial System, Version 3.2

Operating System: VMS

Keywords: • Materials handling • Order entry
• Production control

This system is designed for manufacturers that build or ship to customer order. Those manufacturers can be varied in their procedures and products. Some build partially to stock and others only for the job. Production can be based on a mix of customer forecast and backlog orders. Products can range from metalworking through electronics to parts, equipment, and much more. The system includes order entry/invoicing, quotations, bills of material/routing, inventory/purchasing, job cost/estimating, production planning, shop floor

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control, material requirements planning, tool crib inventory, all financials, word processing, and electronic spreadsheet. Applications can be run individually or integrated as a complete system. The system is fully supported with demonstrations, training, warranty, documentation, telephone support, a continuing maintenance agreement, and dial-in support.

A version of this product is available for the PDP-11 computer.

Price: \$2000 - \$5000

Contact: Arthur Martin, President
(203) 677-6563

COMPUTER COVENANT CORP.
Integrated Manufacturing Systems
790 Farmington Avenue
Farmington, CT 06032

Inventory Control

Operating System: VMS

Keywords: • Inventory • Materials handling
• Production control • Report writer

This inventory control module may be operated as part of the integrated Business Information System to track material from production forecast through purchasing, receiving, incoming test and inspection, multiple stockrooms, multiple stages of work in process, test and inspection, finished products, and shipment to customers. The module may be integrated to one or more other Breuer & Co. modules — Purchasing, Sales Order Processing, Bill of Materials, Job Cost Accounting, and General Ledger. Alternatively, the module may be operated independently of other software.

Integrated with Bill of Materials, the module's production forecast capability can generate purchase requisitions. Reports include inventory status, stockout/pending shortages, material requirements based on production forecast, product commitments based on customer sales orders, receiving and on-order reports, inventory valuation, shipping reports, and transaction reports with receipts, issues, transfers, adjustments, and so on.

A version of this product is available for the PDP-11 computer.

Price: \$6000

Contact: Janna McMillan
(617) 275-5810
BREUER & CO.
54 Middlesex Turnpike
Bedford, MA 01730

Inventory Control

Operating System: ULTRIX-32, UNIX* (Berkeley)

Keywords: • Inventory • Materials handling • Order entry

The Inventory Control system tracks materials through three stages — raw materials, subassemblies, and finished goods. A vendor file and vendor costs are maintained for each raw material. Subassembly and finished-goods costs are updated when raw-materials prices change. Minimum reorder points are used to print a report for ordering raw materials. Production of subassemblies and finished goods relieves raw materials for the proper amounts. When inventory items are ordered, another report tells when raw materials orders are due and which orders are late.

The system is written in C language and uses the public domain Ingres data base written by the University of California at Berkeley. Binary and source codes are available for UNIX* Berkeley 4.1 and 4.2. The source code is available for all others.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: \$4000

Contact: Fred Potthoff

(612) 941-9470

FARGO ELECTRONIC SERVICES, INC.

7150 Shady Oak Road

Eden Prairie, MN 55344

ISAP (Interactive Wire List Preparation)

Operating System: VMS

Keywords: • CAD/CAM • Electrical • Electronic

This CAD/CAM package, developed by Advanced Computer Concepts Inc., converts schematic diagrams and assembly layouts to programming data for wire wrap machines and provides reports supporting the user's design effort. Libraries of devices, schematics, and assembly layouts are interactively prepared and merged to develop the wire wrap data. Continued use expands device and data libraries and reduces custom data entry. Extensive reports and error messages ensure trouble-free development of prototype and production wire wrap boards. ISAP eliminates the time-consuming and error-prone intermediate wire lists, coding sheets, and so on, and optimizes the wire wrap machine data for the most efficient wiring.

A version of this product is available for the PDP-11 computer.

Price: \$1250 - \$4000

Contact: Cheryl Pankratz

(714) 998-6041

MIDCOM CORP.

1940 N. Tustin Avenue, Suite 117

Orange, CA 92665

J/C (Job Costing), MCBA, Inc.

Operating System: VMS

Keywords: • Accounts payable • Cost accounting
• Project management • Security

This complete job costing system provides accurate cost reporting and comprehensive variance analysis. J/C includes interactive entry and editing of labor and material tickets. J/C supports standards or estimates for variance analysis, allocates fixed and variable overhead, provides security and multicompany support, and interfaces to five other MCBA packages. This package also prints a job cost analysis report by job, department, work center part and operation and a variance analysis report that includes rate, yield, performance, and quantity breakdowns for labor, material, and subcontracting.

Special J/C features are job copy, job cost master file, general ledger interface, accounts payable interface, and cost table defaults maintenance.

A version of this product is available for the PDP-11 computer.

Price: \$2500 - \$4000

Contact: Sales Representative
(818) 957-2900

MCBA, INC.
2441 Honolulu Avenue
Montrose, CA 91020

Keane's Factory Information System

Operating System: VMS

Keywords: • Bill of materials • Inventory • Materials handling
• Production control

Keane's Factory Information System is a fully integrated manufacturing system providing on-line updates and access to the data through easy-to-use screens, complete security controls, and error validation. The system is also fully integrated with the Financial Accounting System.

Keane's Factory Information System consists of nine modules: Inventory Control, Factory Order and Pick List, Bills of Material, Shop Floor Control, Costing, Material Requirements Planning, Master Production Scheduling, Purchasing and Receiving, and Process Flow Sheet and Routing System.

The software is compatible with DIGITAL DATATRIEVE.

A version of this product is available for the PDP-11 computer.

Price: \$35,000 – \$60,000

Contact: Robert Clifford

(617) 863-0330

KEANE, INC.

420 Bedford Street

Lexington, MA 02173

LABDAT (Labor and Data Collection)

Operating System: VMS

Keywords: • Data collection • Personnel • Real time

LABDAT is offered as an integrated product with IMCS, IIS's interactive manufacturing control system, or as a stand-alone labor and data collection system that could front end other manufacturing packages. This package consists of three stand-alone modules: human resources management, a time and attendance module, and shift and labor reporting.

A version of this product is available for the PDP-11 computer.

Price: \$25,000 +

Contact: Doug Fine

(602) 323-1813

INTERACTIVE INFORMATION SYSTEMS, INC.

505 N. Alvernon Way

Tucson, AZ 85711

LAMPS (Linear and Mathematical Programming System)

Operating System: VMS

Keywords: • Mathematics • Petroleum • Scientific

This large-scale mathematical programming system is used to solve problems of up to 10,000 rows, with a design maximum of 32,000 rows. For linear programs, the system offers an advanced primal algorithm and extensive postoptimal analysis facilities. Mixed integer programs allow integer and semicontinuous variables, special ordered sets of types I and II, and also linked ordered sets.

LAMPS may be run in batch mode or interactively. Interactive facilities enable the user to modify the matrix, change solution strategies, and examine solutions from the terminal. LAMPS commands have extensive parameter defaults to allow rapid problem solutions. Alternatively, the user can provide parameters that will allow comprehensive control over the search strategy when solving integer problems.

LAMPS features efficient and unified data-handling abilities. Input and output may be done directly with the matrix generator and report writer interface routines, which give access to the problem and solution files, eliminating the inefficient process of producing card image

files for input and output. Industry-standard MPS input format can be accepted, as well as AMS format, which provides for longer names and greater flexibility in defining integer structure.

In the system matrix modification, the saving of solutions and starts from approximate bases is allowed. References to row and column names may be made by masks, which allow a set of rows, columns, or elements to be referred to during matrix modification or interactive inspection of the solution file. This process leads to a compact and efficient definition of the integer structure.

Price: £6000 – £18,000

Contact: Al Hynd

(01) 404 0911

CAP SCIENTIFIC

20/26 Lambs Conduit Street

London WC1N 3LF

England

LINBAL

Operating System: VMS

Keywords: • CAD/CAM • Production control
• Shop floor control • Simulation

This weighted-average line-balancing program provides the optimum time balance between assembly station workloads and the number of operators for a production line. This program, which provides a practical approach to line balancing, is applicable for all manufacturing industries with assembly lines. The program handles single or multiple products and options, as well as multiple operator assembly stations. A precedence diagram need not be prepared. An existing line setup can be used as a starting point for the simulation of the line balance. The program can be tailored to suit specific application needs. A prerequisite for the program is to have time standards stored in the MOST Computer Systems data base.

Price: Available upon request

Contact: Kjell B. Zandin or Mary T. Coughlin

(412) 963-8100

H. B. MAYNARD & CO.

235 Alpha Drive

Pittsburgh, PA 15238

LP (Linear Programming)

Operating System: VMS

Keywords: • Decision support • Pharmaceutical • Simulation

LP performs a very interactive mathematical programming function (analysis) on a given matrix of data. LP allows the use of <, =, > constraints and outputs a message to the user of a feasible, infeasible, or unbounded solution. LP permits a matrix of up to 8000 variables and

solves a wide range of business and engineering problems, including product mix, scheduling, distribution, forecasting, marketing, government efficiency, and production planning.

The price is a 1-time license fee.

A version of this product is available for the PDP-11 computer.

Price: \$5000

Contact: Jon Prescott

(619) 247-7219

J & S ASSOCIATES

13407 Quapaw Road

Apple Valley, CA 92307

LP/PROTRAN

Operating System: VMS

Keywords: • Mathematics • Research • Scientific
• Simulation

LP/PROTRAN solves linear programming problems in operations research, economics and econometrics, agricultural economics, statistics, management (scheduling and other problems), and manufacturing (blending and similar problems). The user defines the problem by specifying the objective function, the constraints, and the bounds, if any. The algorithm implemented in LP/PROTRAN is ideally suited for large sparse-constraint problems.

PROTRAN is easy to use; the user needs no formal programming knowledge. Based on accurate and dependable algorithms, PROTRAN's error checking automatically pinpoints mistakes, and its powerful statements can be easily intermixed with FORTRAN.

Educational discounts are available.

Price: \$2000

Contact: Sales Division

(713) 772-1927

IMSL, INC.

7500 Bellaire Boulevard, NBC Building

Houston, TX 77036

M-Net™ (Manufacturing Network)

Operating System: VMS

Keywords: • Data collection • Networking • Shop floor control

Distribution medium: 800/1600 bpi magnetic tape.

M-Net is a layered network designed for the manufacturing environment. Sales to date have been in the IC, or integrated circuit, manufacturing area, including IC test houses and volume IC consumers. M-Net enables the user to interconnect different makes and types of

production and test equipment into a comprehensive network without purchasing and maintaining levels of proprietary, noncompatible networks. The equipment need not be in the same location as M-Net.

The need to collect data from different design, fabrication, and test equipment is paramount in the integrated circuit industry. Valuable engineering labor and turnaround time are saved, ultimately leading to greater productivity, higher yields, greater quality control, and lower cost.

M-Net has been designed and developed to provide real-time data collection, analysis, control, and display, rather than trying to adapt an existing business system to meet production needs. The key features provide support for a variety of equipment from many vendors; centralized test program control and updating; flexible, easy, nondisruptive modification of network configuration; in-house expertise to modify and to customize the system; and field upgradability to interface with new shop floor systems as older equipment is phased out.

A version of this product is available for the PDP-11 computer.

Price: \$15,000 - \$45,000

Contact: Girish Shah
(602) 622-7707

INTERNATIONAL ELECTRONICS CORP.

1518 E. Broadway
Tucson, AZ 85719

Machining Data Program

Operating System: VMS

Keywords: • CAD/CAM • Materials handling
• Production control • Shop floor control

This program provides optimal speeds and feeds for machine operations, such as drilling, milling, turning, and grinding. The recommended feeds and speeds are based on part material, part dimensions, tool material, machine type, machine condition, and available horsepower.

Price: \$10,000 - \$15,000

Contact: Kjell B. Zandin or Mary T. Coughlin
(412) 963-8100

H. B. MAYNARD & CO.
235 Alpha Drive
Pittsburgh, PA 15238

MAESTRO

Operating System: MicroVMS, VMS

Keywords: • CAD/CAM • Mechanical engineering
• Numerical control • Production control

This state-of-the-art product addressing DNC and factory feedback provides an approach that is appropriate for the operation of any generation of NC-driven production machine — mills, lathes, wirewrap, insertion, CMM, and so on. MAESTRO enables manufacturers to extend their CAD investment for the management of part programs out to the factory floor. As a software management tool, MAESTRO enables manufacturers to manage part program libraries, edit part programs, send electronic mail, monitor machine status, and distribute part programs. MAESTRO's flexibility allows manufacturers to use data communication specific to their environments — local area networks, fiber optics, or standard coaxial cable. For the production machine adapter, MAESTRO offers a choice of three options on how to best interface to any one particular machine. That assures the manufacturer of an approach that fully uses the investments made in the production machine. Each adapter (CNC adapter, DNC adapter, and behind-the-tape reader adapter) is built around standard DIGITAL components and assures the manufacturer of a reliable, consistent, and easily maintained approach to DNC/factory feedback.

A version of this product is available for the PDP-11 computer.

Price: \$18,500

Contact: C. Buckley

(612) 934-1040

MANUFACTURING DATA EXCHANGE

7683 Commerce Way

Eden Prairie, MN 55344

MANMAN/MFG

Operating System: VMS

Keywords: • Bill of materials • Inventory • Production control
• Shop floor control

This interactive menu-driven manufacturing control product optimizes inventory investment, plans and controls priorities and capacities, organizes and tracks shop floor activities, and provides complete cost accounting. The 9-module product contains Material Requirements Planning, Purchasing, Master Production Scheduling, Inventory Control/Physical Inventory, Bill of Materials/Engineering Design, Cost Accounting/Labor Distribution, Capacity Requirements Planning, Resource Requirements Planning, and Work-in-Process/Shop Floor Control.

Price: \$60,000

Contact: Carol Singh, Corporate Communications Coordinator
(415) 969-4442 ext. 4152

ASK COMPUTER SYSTEMS INC.

730 Distel Drive

Los Altos, CA 94022

Manufacturing Control System

Operating System: ULTRIX-32, VMS

Keywords: • Inventory • Production control

Memory required: 128K. Distribution media: 5¼" or 8" diskettes.

This program, written in RM COBOL, is designed for complete control of the job costing and the inventory maintenance of a manufacturing concern. This system is menu driven, with multiuser capabilities; maintains historical costs for each item, eliminating time spent in record keeping; figures sales quotes from historical data; updates purchase orders automatically; and allows the user to set price code levels, resulting in substantial savings in account management time.

A version of this product is available for the PDP-11 computer.

Price: \$11,500

Contact: Bob Ginn

(901) 767-3759

INDUSTRY SOFTWARE SALES, INC.

P.O. Box 240804

Memphis, TN 38124

Manufacturing Spectrum

Operating System: VMS

Keywords: • Accounting • Production control
• Shop floor control

This integrated set of application software modules for the make-to-stock marketplace is written in BASIC-PLUS-2. This completely documented interactive system is menu based and easy to use.

Manufacturing Spectrum packaged software includes such manufacturing applications as quoting and estimating, shop floor control, job cost, inventory control, bill of materials, and production scheduling. Financial applications include accounts payable, payroll, accounts receivable, general ledger, sales orders, and sales analysis. The package price includes a 2-day application engineer implementation visit.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Linda M. Dobias

(617) 933-3780

WHITE HAT SYSTEMS, INC.

331 Montvale Avenue

Woburn, MA 01801

Manufacturing System

Operating System: VMS

Keywords: • Bill of materials • Inventory
• Order entry • Purchasing

These combined interrelated subsystems emulate the operating procedures of a manufacturing plant. That emulation allows a plant to smoothly convert to the automated system. Subsystem interaction among departments is accomplished automatically. Many operating plants may be consolidated upward for division or corporate reporting.

The system can be used by subsystem or as a whole. The system is not industry-specific and therefore can be easily adapted to virtually any manufacturing environment.

Major subsystems include product formulation, costing/pricing, customer quotations, order entry/billing, purchase orders, sales analysis, and financials (G/L, A/R, A/P).

Price: \$13,500 – \$60,000

Contact: George F. Cooper
(412) 355-2868

PITTSBURGH NATIONAL BANK

Financial Systems Group

Fifth Avenue and Wood Street

Pittsburgh, PA 15222

MAP/1™ (Modeling and Analysis Program)

Operating System: VMS

Keywords: • Engineering • Simulation

This simulation-based modeling and analysis program designs and evaluates batch manufacturing systems (discrete event). MAP/1 serves manufacturing and engineering industries. The system has a manufacturing orientation and can model complex manufacturing systems. Models can be built quickly. The user-friendly system requires little training and no programming. Comprehensive output reports are produced.

Price: \$15,000

Contact: Customer Service Dept.
(800) 428-7636

PRITSKER & ASSOCIATES, INC.

P.O. Box 2413

West Lafayette, IN 47906

MAT-PAC

Operating System: VMS

Keywords: • Bill of materials • Materials handling
• Production control • Purchasing

MAT-PAC is a computer system developed for accurate planning and control of materials. Supported by requisitions, purchase orders, and vendor deliveries, this system is designed to facilitate the monitoring and management of material costs and schedules.

Drawing material from either stock inventory or direct purchases, MAT-PAC is a watchdog system for purchasing, delivery, receiving, storing, withdrawals, and transfers. This system can give stock inventory costing and reordering forecasts, write purchase orders, measure vendor performance, and by direct linkage to SPAR's PERT-PAC scheduling system, develop and update material purchase schedules automatically.

- Project features include complete project identification, summary reporting, and selective detail reporting.
- User features are designed to allow fast and easy input and output of data. The system interacts with the user in a question-and-answer dialog and can be operated on line by many users simultaneously.

Automated delivery status and inventory reorder, rapid development of project material requirements, and error detection to ensure data accuracy are among some of the other features available to the user.

- Technical features allow the processing of an unlimited number of projects, requisitions, purchase orders, and inventory items. The system further allows a maximum of 999 items for each requisition.

A user can operate MAT-PAC with PERT-PAC and WORK-PAC.

MAT-PAC permits setting material budgets for cost/schedule performance measurement reporting by project cost account. Consequently, management can monitor actual material costs as purchased, as delivered, and as scheduled for delivery against planned figures.

A version of this product is available for the PDP-11 computer.

Price: \$11,500 - \$30,000

Contact: Frank Weston

(301) 263-8593

SPAR ASSOCIATES

927 West Street

Annapolis, MD 21401

MAXCIM™

Operating System: VMS

Keywords: • Data base management • Financial management
• Information management

This comprehensive manufacturing/financial planning and control system, written in BASIC, provides information for planning, reporting, and controlling manufacturing resources. Based on industry-accepted concepts of Manufacturing Resource Planning (MRPII), the MAXCIM System integrates information from manufacturing, marketing, finance, and engineering functions needed for comprehensive yet precise resource control.

The MAXCIM Manufacturing System is fully integrated with the MAXCIM Financial System through a common data base in which all related information is updated simultaneously by a single data entry. The MAXCIM Manufacturing System includes Inventory, Purchasing, Bills of Material, Work Order Status, Manufacturing Cost, Material Requirements Planning, Shop Routing, and Master Scheduling/Capacity.

The MAXCIM Financial system provides comprehensive financial planning and control by capturing and reporting all transactions needed to generate financial statements. The MAXCIM Financial System includes Order Entry/Invoicing, Sales Analysis, Accounts Receivable, Accounts Payable, General Ledger, and Fixed Assets.

Together the MAXCIM Manufacturing and Financial Systems provide a corporation with a proven solution to maximize the productivity of manufacturing operations while minimizing costs.

Price: \$75,000 - \$150,000

Contact: Sandy Towle
(408) 986-1800
NCA CORP.
Manufacturing Systems Group
3250 Jay Street
Santa Clara, CA 95054

MDT (Multiwire Design Technology)

Operating System: VMS

Keywords: • CAD/CAM • Electronic • Mechanical engineering

Multiwire is a high-density, easily modifiable wired interconnection technology used extensively for complex and high-speed circuit boards. MDT is a software package for designing multiwire circuit boards and is available under license from PCK Technology.

MDT provides CAD tools for design input data preparation from a schematic and a component layout, controlled automatic interconnection routing, and manufacturing data verification for new designs. The system also provides CAD tools for rapid modification of existing designs. Manufacturing (design output) data can be sent to one of the licensed manufacturing centers throughout the world, or the associated manufacturing technology can be licensed from PCK. The design turnaround time, from schematic to production-ready data, can be on the order of days.

The distribution package comprises 232 FORTRAN source modules and 20 MACRO-11 source modules. The design system is generated from that package and provides 73 executable tasks and 14 general batch procedures and utilities. The system requires 3.5 megabytes of on-line disk storage. An additional 1.5 megabytes are required if the distribution source is to be maintained on line.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Bernard Hayduk
(516) 454-4466

PCCK TECHNOLOGY DIVISION

322 South Service Road L.I.E.

Melville, NY 11747

MICS (Manufacturing Information Control System)

Operating System: VMS

Keywords: • Bill of materials • Information management
• Inventory • Production control

MICS allows a user to build an on-line data base with integrated master files, an operation file, a production cost center file, a 12-month projection file, a master manufacturing schedule file, and a shop calendar for 3½ years. MICS consists of the following modules:

- The Bill-of-Material module permits the user to view on line the components of any product, single or indented explosions for desired quantities of the parent product, on-line explosions or implusions on the screen, start/stop date of components in effect, extended component quantities on indented explosion, reference number between indented explosion, and numeric analysis reports for cross-reference.
- The Inventory Control module maintains inventory for up to 99 warehouses and has facilities for a variety of inventory analysis reports. This module also serves as the interface with the accounting and management information system package.
- The Production Control module, the largest module in the MICS package, enables the user to begin with a quotation or open a job directly and to cancel or accept a quotation.
- The Cost Control module provides an on-line cost inquiry that provides information on standard versus actual costs.
- The Requirements Planning module helps users plan for raw materials and purchased parts for three to five years, as well as the number of people in the plant and the number of machines or shifts.
- The Capacity Planning module sets up for every production cost center weekly time buckets with the planned number of hours.
- The Machine Control module retains historical information about machine repairs for an unlimited time. The system automatically prints the work orders, provides reports, and forecasts spare parts and labor.
- The Purchase Order module permits the user to create a purchase order manually or automatically.

Price: \$2000 – \$12,000

Contact: Frank Ciacci
(416) 475-5155

SYSTEM DYNAMICS CORP.

151 Esna Park Drive

Markham, Ontario L3R 3B1

Canada

Minischedule and Machine Loading

Operating System: VMS

Keywords: • Inventory • Production control • Scheduling
• Shop floor control

This system is a simple yet sophisticated means of scheduling a manufacturing operation and keeping track of the factory workload at the same time. This stand-alone software, written in DIBOL, is intended for the manufacturer who is running many jobs simultaneously. The software keeps track of jobs, work centers, and time and prints or displays the following:

- A detailed schedule by work center, week, and job in a handy format for the factory floor supervisor
- A 1- or 2-page summary report showing the factory workload in work hours by work center and by week for one or more 10-week periods
- A job report showing the operations, time required, and work remaining to be done on each job
- A report that values the work-in-process inventory
- An inquiry capability by terminal so that the status of a given job can be displayed

Upon completion of the job, the schedule records may be kept and compared to the actual time taken. This process produces a continuing job time and average cost record, by part number, for continuing use and analysis.

This easily installed system is not dependent on the installation of other manufacturing applications.

A version of this product is available for the PDP-11 computer.

Price: \$2500 – \$4000

Contact: Ralph Spofford
(603) 526-4000

ADMINISTRATIVE PRODUCTIVITY, INC.

P.O. Box 302

New London, NH 03257

MMS (Materials Management System)

Operating System: VMS

Keywords: • Inventory • Materials handling
• Metals • Purchasing

MMS is a fully integrated linear programming software package for the metals industry and includes least-cost charge design, final alloy additions, inventory control, purchasing optimization, and management reporting. MMS consists of the following programs:

- Least Cost Charge Design reduces metal mix cost, produces a more consistent product, and allows higher quality control and fewer off-analysis heats. This program optimizes on natural elements as well as complex relationships between elements.
- Least Cost Final Additions produces final addition calculations with computer speed, reducing tap time and unnecessary alloy additions.
- Inventory maintains an up-to-date materials inventory and provides accurate reports on material receipts and material usage on a heat-by-heat, month-to-date, and year-to-date basis.
- Purchase Optimization calculates the maximum purchase price for each material under consideration. Thus, effective purchases are made by evaluating your current inventory against current market conditions.
- Management Reporting gives management personnel access to recent, accurate information from a common data base. Customized reports give the information needed to track production, productivity, and costs involved in the metals industry.

Pyromet Systems provides an optional annual software-maintenance agreement. The programs may be leased or purchased and are available in separate pieces or as a complete package. Other standard and custom-designed packages are also available. All software is fully documented and supported.

A version of this product is available for the PDP-11 computer.

Price: \$10,000 – \$50,000

Contact: Donald Eckley
(412) 828-0680

PYROMET SYSTEMS, INC.

Expressway Park, Gulf Lab Road
Pittsburg, PA 15238

MOST Computer Systems

Operating System: VMS

Keywords: • Data base management • Production control
• Shop floor control

These systems provide work measurement and standards-setting programs for manual labor in manufacturing. The five operating levels are methods and workplace data development, filing and retrieval for data management, application of time standards, data update and maintenance, and documentation. The standards generated by the program can be easily interfaced to other CAM modules. Optional modules are available in machining, welding, line balancing, routing, and labor reporting.

A version of this product is available for the PDP-11 computer.

Price: \$55,000 – \$82,500

Contact: Mary T. Coughlin or Kjell B. Zandin
(412) 963-8100

H. B. MAYNARD & CO.
235 Alpha Drive
Pittsburgh, PA 15238

MRP (Material Requirements Planning)

Operating System: VMS

Keywords: • Materials handling • Production control
• Scheduling

MRP includes the following features: supports master production scheduling, generates time-phased requirements for all levels of your product structure, computes when and in what quantities component parts are required, uses a fast regeneration algorithm, reports exceptions with recommended changes to order quantities and dates, pegs material requirements to show which customer orders or shop orders were created by demand, supports changes in product structures through parent/component effectivity dates, allows the definition of three planning-period calendars, enables full printer spooling capabilities, and supports security and multiple companies.

Any report generated by MRP may be spooled to the disk file. You may later review what reports are currently stored on the disk and print the ones you want.

The security system allows up to 200 passwords and provides access restrictions at the file level by company.

Multiple-company support allows up to eight companies to use the system at any time.

A version of this product is available for the PDP-11 computer.

Price: \$4000 – \$6000

Contact: MCBA Sales Representative
(818) 957-2900

MCBA, INC.
2441 Honolulu Avenue
Montrose, CA 91020

MRP (Material Requirements Planning System)

Operating System: VMS

Keywords: • Distribution • Materials handling • Purchasing

MRP can perform as both a net change and a regenerative material requirements planning system. The time-phased logic of the system helps management in determining manufactured and purchase material requirements. Both net change and regenerative functions are designed to satisfy product demands, expressed as master schedule items, customer orders, or other user-defined requirements. System

logic will determine the proper component to end-item levels. MRP will provide a simulation of what effect the manufacturing plan has on current inventory supply. The system projects what shortages will occur and provides recommended or "planned" order suggestions to prevent their occurrence.

As part of a modular manufacturing system, the White Hat MRP System can be installed with the White Hat Inventory Management and Control System (IMCS), Purchasing Management System (PMS), Order Processing and Sales Analysis (OPSA), Shop Floor Control (SFC), and Bill of Materials System (BOMS). Reporting output can be either in user-defined, horizontal bucket format or displayed in a vertical, bucketless approach. On-line pegging and exception message display features provide powerful tools in materials problem resolution.

Price: Available upon request

Contact: Linda M. Dobias
(617) 933-3780

WHITE HAT SYSTEMS, INC.
331 Montvale Avenue
Woburn, MA 01801

MRP/Inventory

Operating System: VMS

Keywords: • Bill of materials • Cost accounting • Inventory

Distribution medium: 9-track magnetic tape.

This system for manufacturers of mixed duty/duty-free products provides tracking of inventory movement from order through assembly to finished product, transfer of parts between jobs, standard cost accounting for transactions, and on-line display of 20 or more levels of implosion or explosion of part or subassembly.

Additional features include maintenance of inventory quantities and costs by job number within part, as well as by part, which is especially useful if costs for the same part vary between jobs. The system is highly interactive and maintains tight controls and detailed audit trails. A high-level report writer generates reports from the data base, audit trails, or both. A 1-minute session enables the user to initiate reports with user-specified sorts, page breaks, titles, selects, and totals.

A version of this product is available for the PDP-11 computer.

Price: \$20,000

Contact: Robert Brown
(902) 429-3175

DYMAXION RESEARCH LTD.
Box 1053, Armdale Station
Halifax, Nova Scotia B3L 4L5
Canada

MTS 100**Operating System:** VMS**Keywords:** • Process control • Production control
• Quality control • Shop floor control

MTS 100 is an engineering and manufacturing evaluation and control system for industries that manufacture semiconductors, printed circuit boards, and complete integrated electronic products. The system assists engineering and manufacturing in the process, cost, equipment, production, factory control, and yield improvement.

The features of this relational data base system include:

- Complete production scheduling, planning, and control capabilities, with plan-variance reporting and action recommendations
- Floor inventory tied to direct usage and material movement and bottlenecks reported for people and equipment, based on generated standards and real-time situations
- Complete cost planning and control capabilities for direct and indirect labor and material
- Extremely powerful process control and engineering capabilities and handling of several levels of data: in wafer, wafer to wafer, lot to lot, or components, boards, subassemblies, and so on
- The ability to define data, units, scale multiplier, and valid and specification limits, plus the provision for performing calculations on data and treating the calculated values as original data
- Comparisons of data against internally generated standards for cycle times, costs, equipment uptimes, scrap and rework rate, and yields and reporting on any out-of-control or out-of-specification situations, with material disposition feedback
- Easy selection and reporting of data, plus powerful statistical analysis capabilities
- Provision for machine interfaces for data gathering and equipment control
- The ability to easily define and install custom versions of the system and easily modify and expand the system

A version of this product is available for the PDP-11 computer.

Price: \$35,000 – \$175,000**Contact:** Brian Taylor
(617) 263-3408

MICROPRODUCT TECHNOLOGY SOFTWARE, INC.

945 Concord Street

Framingham, MA 01701

NC Tape Verification for Manufacturing Operations**Operating System:** VMS**Keywords:** • CAD/CAM • Numerical control
• Pre- and postprocessors • Production control

This system provides production drawings for checking and verifying the dimensions of the part to be stamped and for correcting tooling setup and machine operations before punching operations are initiated. The program saves production down time and set-up time, thereby increasing the use of NC equipment. The user/machine interface prompts help the operator in data entry. The system features drawing annotation and legends, scaling, part development dimensions, and a description of the turret tooling to make the part. The description verifies the NC tapes by generating a finished drawing to the resolution of .005".

The system uses the standard tape generated by the tape-preparation system. Use of that tape eliminates any intermediary tapes or tape-handling operations. No errors occur in producing and verifying the final tape. The tape used by the NC machine will be drawn by the NC verification drawing system.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Joseph F. deSpautz
(609) 234-3666

APPLIED DIGITAL COMMUNICATIONS, INC.

214 Flynn Avenue

Moorestown, NJ 08057

NCL — Interactive Graphics Software

Operating System: VMS

Keywords: • CAD/CAM • Numerical control
• Pre- and postprocessors • Programming tools

Designed to machine complex 3-dimensional geometry on 3-, 4- and 5-axis N/C machines, NCL allows interactive geometry definition; each entity can be viewed graphically for correctness on a statement-by-statement basis. Tool motion statements can also be graphically displayed on a statement-by-statement basis. If a move is not acceptable to the user, the move can be stopped, and the user can correct the problem and restart the motion. The aborted move is not passed to the CLFILE. These features offer the user the blueprint to N/C machine media concept in one programming session for simple or difficult parts. For minor corrections, the NCL processor may be run in a batch mode without interactive intervention. The English APT-like source generated by NCL in either interactive or batch mode makes program maintenance easy. On-line help commands make NCL an easy processor to learn and to use.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Sales Department
(714) 898-2649

NUMERICAL CONTROL COMPUTER SCIENCES
12552 Western Avenue
Garden Grove, CA 92641

NCPRO™

Operating System: VMS

Keywords: • CAD/CAM • Graphics • Numerical control
• Programming tools

NCPRO is a menu-driven, interactive graphics part programming system. NCPRO's system features:

- The ability to read and use existing tapes
- Brief user responses that eliminate detailed statements and automatically generate NC tape blocks
- User-defined NC formats that eliminate the need for postprocessors
- Embedded mathematics that eliminate manual calculations
- Reformatting of existing tapes, including circular interpolation, leading and trailing zeros, and absolute to incremental
- Automatic generation of lathe roughing cuts
- Pocketing routines, including islands
- Define Toolpath, which allows creation of several NC tape blocks at one time, with minimal user responses, as well as reverse Toolpath from existing tapes
- Digitizing, which allows graphic determination of coordinates on existing tapes
- The ability to adjust tool radius compensation
- Drilling, boring, and tapping cycles for machines without those canned cycles or the ability to maximize available cycle use
- Macro capability for fast programming of repetitive sequences
- Networking with NCNET, a field-tested DNC that eliminates the need for punched tape

NCPRO features include a full-function editor and menu-oriented graphics; graphic program display and verification of tool motion; backplotting, which permits use of existing tape library without reprogramming; descriptive error messages and help prompts; single- or multiuser capability; remote location and communications capability; support for complex multiaxis machine tools, as well as for popular routines for lathes, mills, machining centers, EDMs, punches, and other machine tools; full plotter capabilities; and a dot matrix printer and a tape reader punch.

NCPRO is fast and easy to learn, thereby improving NC/CNC productivity. With more than 2000 RWT installations worldwide, NCPRO offers field-proven reliability.

A version of this product is available for the PDP-11 computer.

1290 Manufacturing

Price: \$20,000 – \$40,000

Contact: Cole Oehler
(312) 952-1710

RWT CORP.

415 West Golf Road, Suite 28
Arlington Heights, IL 60005

NCTAPE (Numerical Control Tape Processing System)

Operating System: VMS

Keywords: • CAD/CAM • Data collection • Graphics
• Numerical control

Distribution media: 9-track 800/1600 bpi magnetic tape, RL02, RX01, RX02.

NCTAPE allows an NC programmer to create or modify NC programs quickly and easily. NC programs are created from a computer-controlled measurement of a part, using a coordinate measuring machine and digitizer. Programs using linear and circular interpolation or linear interpolation may be created. Sequence numbers are generated automatically. Paper tape copies of a program may be punched in either RS244 or ASCII character code. An NC program may be modified to produce a part either larger or smaller than the original part. An NC program may also be modified to produce several parts. An inspection program allows the dimensions of a part to be compared with the dimensions of a previously digitized part. NCTAPE is written in FORTRAN.

A version of this product is available for the PDP-11 computer.

Price: \$6000

Contact: Kenny Purcell/Jim Levie
(205) 536-8581

REMTECH, INC.

2603 Artie Street
Huntsville, AL 35805

NICAM III (Numeridex Integrated Computer-Aided Manufacturing)

Operating System: VMS

Keywords: • CAD/CAM • Engineering • Metals
• Numerical control

This advanced NC/CNC programming system contains an automated formatter, advanced machine define capability, automatic tooling, motion, and other advanced control logic. NICAM III applies to the computer-aided manufacturing metalworking industry.

The system is easy to use and flexible to accommodate first-time NC programmers with the help file of 44 fixed definitions. More advanced NC programmers will appreciate the free-formatting option of the Numerical Control System (NCTS) geometry. Both methods of programming provide rapid response time with immediate graphics verification. Both color and monochrome interactive graphics are offered with the system. Business software is optional.

The system is supported through software maintenance and comprehensive easy-to-read user-oriented manuals. NICAM III can interface with most CAD/CAM systems to give manufacturing engineers a system that can accept a design data base file and process the information into NC machine-usable data (punched tape) or Direct Numerical Control (DNC) interface.

A version of this product is available for the PDP-11 computer.

Price: \$20,000 - \$35,000

Contact: Mike Donnelly or Greg Altman
(312) 541-8840

NUMERIDEX INC.

P.O. Box 11000

Wheeling, IL 60090

NUFORM Level I

Operating System: VMS

Keywords: • CAD/CAM • Numerical control
• Pre- and postprocessors • Shop floor control

Distribution media: magnetic tape, RL01, RL02, TU58 DECTape II cartridge.

This comprehensive system, consisting of a universal processor and postprocessors, prepares tapes and control data for N/C tools used in the 2½-axis mode. That mode is generally used for 3-, 4-, and 5-axis machining centers with two axes in continuous and simultaneous motion and all other axes in a positioning mode only, except for ramp cuts, and so on. The same philosophy and the same input handle 3-, 4-, and 5-axis machining centers, 2- and 4-axis lathes, point-to-point, punch presses, grinders, wire elox, flame cutters, and lasers. For example, the user does not have to learn a different system for lathes or punch presses, and so on.

The brief parameterized all-numeric input eliminates the heavy syntax and other troublesome characteristics of the alphanumeric systems and drastically reduces programming time and computer running time. The NUFORM system handles the full spectrum of geometrics, methods, and machining operations.

1292 Manufacturing

Available with NUFORM Level I are a plot of coordinates used in defining the part; cutter center line plots in XY, XZ, YZ, including tool size and position plot for drill cycles; isometric and perspective plots; lathe and punch press plots; and an unfolding plot for machining centers with rotary tables.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: A. S. Thomas

(617) 329-9200

A. S. THOMAS, INC.

355 Providence Highway

Westwood, MA 02090

NUFORM Level II

Operating System: VMS

Keywords: • CAD/CAM • Numerical control
• Pre- and postprocessors • Shop floor control

Distribution media: magnetic tape, RL01, RL02, TU58 DECTape II cartridge.

This interactive design tool for complex geometries, consisting of a universal processor and a postprocessor, handles 3-dimensional contouring in which three, four, or five axes may move simultaneously and continuously. The 3-dimensional plot capability permits the user to view the object at any desired orientation. The system is applicable to sculptured surfaces, such as airfoils, swarfing, and all 3-dimensional complex geometries (dies, molds, patterns, and so forth). The system has the full capability of blending surfaces and orienting the tool axis to any desired attitude with respect to the surface or surfaces.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: A. S. Thomas

(617) 329-9200

A. S. THOMAS, INC.

355 Providence Highway

Westwood, MA 02090

OIR MultiCapp Process Planning/Classification and Coding

Operating System: VMS

Keywords: • CAD/CAM • Electronic

This production-proven computer-assisted process planning system is easy for process planners and other manufacturing personnel to use. This on-line system for retrieval, maintenance, and standardization of process planning information includes detailed part information, routing information, and manufacturing instructions. OIR MultiCapp can be integrated with a company's existing MRP system or other CAD/CAM applications.

Included within the standard OIR MultiCapp package is the flexible OIR MultiClass Classification and Coding system, which allows the user to create and use multiple Group Technology classification and coding structures. OIR MultiClass comes with a code for machined and sheet metal parts; other applications include tooling, assemblies, electronics, and electromechanical parts, as well as in-house or preexisting code structures. OIR MultiClass makes the OIR MultiCapp Process Planning system useable by a wide variety of functions in the manufacturing environment.

The MultiClass Code Number is the key that allows the process planner to retrieve process plans for parts that are the same as or similar to the one on which the process planner is working. That code number can also provide the information necessary for a Group Technology approach to manufacturing standardization.

Additional modules that expand the usefulness of OIR MultiCapp include OIR Automated Time Standards, OIR Tool Tracking and OIR Mass Update.

A version of this product is available for the PDP-11 computer.

Price: \$95,000

Contact: Julia Herbert

(617) 890-4030

OIR (ORGANIZATION FOR INDUSTRIAL RESEARCH)

240 Bear Hill Road

Waltham, MA 02154

OIR MultiGroup Group Technology Analysis

Operating System: VMS

Keywords: • CAD/CAM • Electronic

The OIR MultiGroup series of analytical and reporting programs provide the information necessary to standardize and optimize a user's CAD/CAM operations. OIR MultiGroup facilitates mass-production economies and efficiencies in batch environments. The system groups similar parts into families for more efficient treatment in design and production. Specific benefits of MultiGroup analysis include standardized routings, optimal machine tool usage and arrangement, manufacturing and design standards, reduced rework and scrap rates, and minimized throughput time.

The MultiGroup package includes the OIR MultiClass Classification and Coding system, which provides the structure that enables MultiGroup to work with multiple code structures for machined and sheet metal parts, tooling, assemblies, electronics, and electromechanical parts, as well as in-house or preexisting code systems.

A version of this product is available for the PDP-11 computer.

Price: \$107,000

Contact: Julia Herbert

(617) 890-4030

OIR (ORGANIZATION FOR INDUSTRIAL RESEARCH)

240 Bear Hill Road

Waltham, MA 02154

OIR MultiTreeve Design Retrieval System

Operating System: VMS

Keywords: • CAD/CAM • Electronic • Graphics
• Purchasing

This system provides an interface among classification and coding, Group Technology, and computer graphics. OIR MultiTreeve makes it possible to quickly and easily retrieve design and manufacturing information on a computer graphics terminal by providing a means of identifying and retrieving existing parts that are the same as or similar to new parts in design, based on shape and manufacturing characteristics.

The key to the system is the OIR MultiClass Classification and Coding module, a highly flexible software system that allows the user to build and use up to 11 code structures, including codes for machined and sheet metal parts, assemblies, electronics, purchased parts, and tooling. Thus, OIR MultiTreeve can be used by many functions in the design and manufacturing environment.

A version of this product is available for the PDP-11 computer.

Price: \$75,000

Contact: Julia Herbert

(617) 890-4030

OIR (ORGANIZATION FOR INDUSTRIAL RESEARCH)

240 Bear Hill Road

Waltham, MA 02154

OMNICONROL® and OMNIPREP®

Operating System: Independent, VMS

Keywords: • CAD/CAM • Data collection • Numerical control
• Shop floor control

OMNICONTRON, a CAD system for large and small facilities, distributes tape code data to machines and collects shop floor information. Hardware and software work together to solve machine tool application problems. The system's major components are the host module, a behind-the-tape-reader interface, a data display terminal, a DNC increment, and a program call-up box.

OMNIPREP tape preparation systems use the SPLIT® programming language and are designed as flexible, low-cost disk-based systems that reduce the time required to generate an NC part program. The system's major components are a line printer, a plotter, a tape/reader punch, a data display terminal, and either a hard or a floppy disk drive.

A version of this product is available for the PDP-11 computer.

Price: \$10,000 - \$100,000

Contact: Robert J. Samson, Vice President, Sales and Marketing
(815) 229-4300

WCI — CONTROLS AND DATA SYSTEMS
527 Colman Center Drive, P.O. Box 7030
Rockford, IL 61125

OPSA (Order Processing and Sales Analysis System)

Operating System: VMS

Keywords: • Billing • Distribution • Order entry
• Sales analysis

This comprehensive interactive order processing system is integrated with White Hat's Inventory Management and Accounts Receivable systems, thereby allowing on-line customer verification and credit checking. Billing and shipping information is retrieved, along with customer cash-discount terms, applicable product-line discounts, and sales tax information, to be used in pricing order line items. Orders may be released, modified, rescheduled, or canceled through on-line updating procedures. The system supports full or partial shipments, with multiple-order releases based on line-item shipment dates. Line information is provided to sales analysis for product and customer reporting. During order preparation, product and price data is accessed to provide pertinent ordering information for each product. Standard reporting capabilities include order status reporting, invoices, customer sales and product sales reports, product/price master list, picking sheets, and a backlog reporting module.

Price: Available upon request

Contact: Linda M. Dobias
(617) 933-3780

WHITE HAT SYSTEMS, INC.
331 Montvale Avenue
Woburn, MA 01801

Oscar

Operating System: VMS

Keywords: • Cost accounting • Inventory

This sophisticated package for stock control and recording enables you to keep inventory overhead under tight control. Oscar can handle parts explosions and detailed costings. Information can be either displayed instantly on the screen on a conveniently located computer terminal or printed out as hard copy.

Oscar, aimed primarily at the small to medium-size manufacturing company faced with controlling valuable stock in an assembly building environment, contains English-like language, parts explosion, advance stock allocation, kit issue, on-line inquiry, cross-referencing, costing, and security.

A version of this product is available for the PDP-11 computer.

Price: £4000 - £9000

Contact: R. A. Stock
(0734) 699777

D. M. ENGLAND & PARTNERS LTD.
Lytham Court, Lytham Road
Woodley, Reading
Berkshire RG5 3PQ
England

Performance Pro

Operating System: VMS

Keywords: • Inventory • Maintenance • Purchasing
• Warehousing

This integrated package, written in VMS COBOL, handles maintenance management, inventory control, purchasing, and labor data collection. The fully on-line and interactive system provides users with immediate access to maintenance and materials information. Complete cost reporting and inquiry allow tracking and control of maintenance costs as they occur.

Planned or predictive maintenance schedules are maintained by the system, and work orders are automatically generated when due. A comprehensive on-line scheduling and planning capability is provided to balance workload with available staff.

The on-line inventory control capability includes requisitioning directly from work orders, charging costs for materials to work orders, as well as on-line receiving. As a result, computer-maintained inventory balances immediately reflect changes and can be used for immediate management decisions.

Purchase orders can be printed on demand, and automatic reorder advice generation creates a skeleton purchase order for rapid buyer action. Nonstock purchase requests are entered on line by users and allow for tracking at all times during the purchase cycle.

Labor data collection modules are available to allow labor costs from time cards to be accumulated by work order. An interface capability to payroll systems can also be provided.

Source programs are available. An edit file containing user-defined parameters makes it easy to adapt the system without program modification. Installation assistance can be provided.

Price: \$5000 - \$75,000

Contact: Dave W. Bullock
(415) 838-7464

PERFORMANCE TECHNOLOGY, INC.
379 Diablo Road, Suite 212
Danville, CA 94526

Perspective/700 Bill of Materials System

Operating System: VMS

Keywords: • Bill of materials • Cost accounting • Inventory
• Order entry

This system lets the user define parent items or finished goods and their associated kits, assortments, subassemblies, or raw-material components. Parent item numbers are verified against the Perspective/700 inventory control master file. A bill of material cost listing can be generated on demand, with item description and costs extracted from the inventory master file. An optional depletion processor can relieve component inventory based on posting of finished goods receipts.

The Materials Requirements Report (MRP) forecasts inventory requirements (finished goods, kits, assortments, and, optionally, raw materials). When combined with Perspective/700 Customer Order Processing and Purchasing systems, a fully automated system is achieved. MRP allows the user to define up to six time frames, based on date ranges, for reporting purposes. Reports include the multilevel bill of materials, bills costed at current or standard, the where-used report, decimal components quantities, the regenerative material requirements report, and multiuser/multicompany report.

A version of this product is available for the PDP-11 computer.

Price: \$2000 - \$5000

Contact: Michael B. Andelman, President
(312) 953-2220

LIOCS CORP.
246 E. Janata Boulevard
Lombard, IL 60148

Pioneer COMMAND Bill of Materials Processor Module

Operating System: VMS

Keywords: • Bill of materials

This module, developed by Pioneer Software International, is interactive, on line, user friendly, and comprehensive. The system can create and maintain bills of material, which can include assemblies and sub-assemblies down to a maximum of 99 levels. The module is an integral part of Pioneer's COMMAND System for Financial Management, Distribution, and Manufacturing. Pioneer's COMMAND system is written in BASIC-PLUS-2 and requires a minimum of 64K words. Because the system is based on Userware International's USER-11 Database Management System, extensive on-line inquiry and ad hoc reporting are available.

The bill of materials processor, combined with the parts master file, gives, for any particular assembly, a list of all subassemblies, purchased parts, and raw materials involved in its manufacture and shows the required quantities and costs of each. A structure file is maintained that links each assembly part to its components and allows searching in both directions through the assembly structure. Where-used information can be produced automatically. Ghost or phantom assemblies are supported. Provisions are made to copy a structure, allowing for same-as-except structures. Mass replacements and deletions are allowed. Screen displays include indented and single-level explosions, indented and single-level where-used, and trial kitting. Numerous reports are available, including indented and single-level explosion, single-level and summarized where-used, incremental and accumulated cost, and stock status.

A version of this product is available for the PDP-11 computer.

Price: \$6000 - \$12,000

Contact: Jered Cady, Vice President, Sales and Marketing
(619) 745-6006

USERWARE INTERNATIONAL
2235 Meyers Avenue
Escondido, CA 92025

Pioneer COMMAND Material Requirements Planning Module

Operating System: VMS

Keywords: • Inventory • Materials handling • Purchasing

This module, developed by Pioneer Software International, is a part of Pioneer's COMMAND System for Financial Management, Distribution, and Manufacturing. Pioneer's COMMAND system is written in BASIC-PLUS-2 and requires a minimum of 64K words. The module requires the Bill of Materials Processor. Because the system is based on Userware International's USER-11 Database Management System, extensive on-line inquiry and ad hoc reporting are available.

The MRP system works on a regenerative basis, on either a daily or a period basis. Typically, MRP reports are generated on a regular basis somewhere between a week and a month. When the MRP build is started, the operator can include open sales orders, current purchase and work orders, and the master forecast. The system allows several different reorder policies to be used, from a simple replacement of parts used to a sophisticated EOQ/Minimum Inventory level based on previous usage. A variety of screen displays are available, including the review of all data used in generating usage schedules for a given item. Numerous reports are available, including requirements planning detail, planned purchase orders, planned work orders, and value of purchase orders by periods.

A version of this product is available for the PDP-11 computer.

Price: \$6000 - \$12,000

Contact: Jered Cady, Vice President, Sales and Marketing
(619) 745-6006

USERWARE INTERNATIONAL

2235 Meyers Avenue

Escondido, CA 92025

Pioneer COMMAND Production Control Module

Operating System: VMS

Keywords: • Production control • Project management
• Scheduling

This module, developed by Pioneer Software International, is an interactive, on-line, user-friendly system consisting of work order processing and costing, routing, and work center loading. The Production Control module is a part of Pioneer's COMMAND System for Financial Management, Distribution, and Manufacturing. Pioneer's COMMAND system is written in BASIC-PLUS-2 and requires a minimum of 64K words. Because the system is based on Userware International's USER-11 Database Management System, extensive on-line inquiry and ad hoc reporting are available.

The Production Control module provides a means of managing the generation, progress, and closing of work orders in a batch assembly and manufacturing environment. Because this module is part of the COMMAND system, it is normally installed with the Bill of Materials Processor and Inventory Management modules. The work order processing and costing system provides a basis for controlling work in progress on a batch or a job basis. Work orders may be created manually, from a bill of materials or from routings. Extensive provisions are available for modifying, scheduling, and rescheduling work orders. The routing system allows the operator to detail both components and operations into job steps. Those routings, combined with the work order information and manpower information, are used by the Work Center Loading module to schedule jobs across work centers. A variety of screen displays are available, as well as numerous reports.

1300 Manufacturing

A version of this product is available for the PDP-11 computer.

Price: \$6000 - \$12,000

Contact: Jered Cady, Vice President, Sales and Marketing
(619) 745-6006

USERWARE INTERNATIONAL
2235 Meyers Avenue
Escondido, CA 92025

PIOS (Production and Inventory Optimization System)

Operating System: VMS

Keywords: • Information management • Production control
• Scheduling • Shop floor control

This on-line interactive manufacturing control system includes daily net change and regenerative MRP. The eight major PIOS modules cover bill of materials, inventory control, material requirements planning, shop floor control, master production scheduling, purchasing management system, cost management system, and customer order entry. The modules can be used stand alone or can be integrated to provide a complete closed-loop system. That flexibility allows users to implement PIOS modules according to need. Both single- and multiplant versions are available.

User-friendly PIOS is installed using the VAX/DBMS data base and VAX communications monitor. PIOS is designed and programmed in "native" data base mode for maximum efficiency and throughput.

PIOS documentation includes the *Data Base Description* and *Installation Guide* system reference manuals and the *Management Guide* and *Handbook* for each module. In addition, in-house customer training is available.

Price: \$25,000 - \$250,000

Contact: John H. Moore or L. Anne Carney
(800) 527-5915

RATH & STRONG SYSTEMS PRODUCTS, INC.
14901 Quorum Drive, Suite 600
Dallas, TX 75240

PMS (Preventive Maintenance Scheduling System)

Operating System: VMS

Keywords: • Maintenance • Metals • Scheduling
• Warehousing

This system provides maintenance scheduling, repair parts and warehouse parts inventories, backlogs, repair history, parts reorder notification, equipment performance, equipment costs, and history recall by keywords. The user-friendly interface enables non-data processing

specialists to use the system. The user-defined system allows scheduling of maintenance by calendar or by miles, tons, and so on. PMS services multiple users and uses file sharing and on-line update and inquiry. The system is supported by 1200 baud modem.

The software may be purchased separately, or the system is available as a turnkey system with the hardware, operating system, application software, and data files "pregenerated" and ready for data entry.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: William E. Walo

(702) 384-7641

SIMCO, INC.

801 S. Rancho Drive, Suite E2

Las Vegas, NV 89106

PMS (Purchasing Management System)

Operating System: VMS

Keywords: • Purchasing

This interactive purchasing and receiving module in the White Hat MRP II manufacturing management system is integrated with the Inventory (IMCS), MRP, and Accounts Payables (APS) products. Both stocked and nonstocked line items are supported, and receipts are posted directly to inventory. A wide variety of user-defined transactions are available, and material may be tracked as returned for credit, returned for replacement, scrapped, in MRB, in QC, or accepted. Purchase orders and change orders are printed. Stocked items are validated to inventory when entered.

Both pay-to and multiple purchasing vendors are supported in the vendor master file, which is shared with Accounts Payable. Reporting includes a wide variety of status, reorder, and follow-up reports.

Price: Available upon request

Contact: Linda M. Dobias

(617) 933-3780

WHITE HAT SYSTEMS, INC.

331 Montvale Avenue

Woburn, MA 01801

P/O (Purchase Order and Receiving), MCBA, Inc.

Operating System: VMS

Keywords: • Distribution • Purchasing

P/O helps ensure that the correct quantity and quality of material are available when needed and wanted. Improved methods of vendor analysis help reduce shortages as well as the delivery of off-standard material.

1302 Manufacturing

P/O facilitates better use of the buyer's time. Time-consuming semiclerical activities are reduced or eliminated. The buyer thus spends more time seeking a better price while maintaining reliable sources of supply. The cash requirements for accounts payable can be developed from purchase orders.

Receiving significantly reduces the overall time from receiving to stores. Critical material can be delivered to the correct designation more quickly. Where information or documents are missing, P/O provides extensive information to help identify the receipt.

P/O, which requires MCBA's Inventory Management (I/M) and Accounts Payable (A/P), allows on-line entry and editing of purchase orders and receipts, supports blanket purchase orders and scheduled receipts reporting, prints purchase orders, provides powerful vendor analysis and on-line cash requirements inquiry, allows the user to report rejects at receipt time, notifies the user when early shipments and over/under shipments occur, supports multiple vendors for each item, allows for preentered table-driven notes and manually entered notes for each purchase order and/or line item, interfaces to three other MCBA application packages, and supports multicompanies and password security.

A version of this product is available for the PDP-11 computer.

Price: \$3000 - \$4500

Contact: Sales Representative
(818) 957-2900

MCBA, INC.

2441 Honolulu Avenue
Montrose, CA 91020

PRINCE (Production Information Center)

Operating System: VMS

Keywords: • Bill of materials • Inventory • Production control

Memory required: 512KB. Distribution media: diskette, magnetic tape.

This manufacturing planning system, written in COBOL, was developed in cooperation with the Electrotechnical faculty in Sarajevo. The system supports product development functions, such as product design, tooling, standardization and unification, and calculation of final costs. The system also controls product preparation from order processing to job scheduling. Other functions include product control and electronic mail. Transactions from PRINCE can be used for book-keeping, payroll, and analyses of costs for materials and products. PRINCE uses the TOTAL (CINCOM) data base management system. The system serves multifactory, multiproduct organizations and works with any product structure or production, sales, coding, or purchasing system.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Kemal Taljanovic

(071) 541061

TVORNICA ARMATURA ALIPASIN MOST

Dzemala Bijedica 172

Sarajevo 71000

Yugoslavia

PROFITKEY® Job Shop System

Operating System: ULTRIX-32, UNIX* (Berkeley)

Keywords: • Information management • Management
• Production control • Scheduling

The PROFITKEY Job Shop System is a proven management tool that provides the user with the up-to-date information needed to more effectively plan, schedule, and control the manufacturing resources to achieve better efficiency and higher profits. PROFITKEY is a highly interactive, easy-to-use system that is designed to be installed and used by a job shop without requiring additional personnel. No computer expertise is required to implement and operate the system. From small job shops to major machine shops, PROFITKEY has provided the solution to delivery problems, shop floor control, and company productivity.

PROFITKEY is modular to meet the unique requirements of each user. The modular design brings a complete information system within economic reach of smaller companies and allows the user to expand in a planned and orderly fashion.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$6000 - \$24,000

Contact: W. W. Dockins

(305) 743-7400

KEY SYSTEMS, INC.

Box 1319

Marathon, FL 33050

PROFITKEY® Manufacturing Control System

Operating System: ULTRIX-32, UNIX* (Berkeley)

Keywords: • Inventory • Order entry • Production control
• Scheduling

PROFITKEY gives chief executive officers and their staffs the tools required to plan and control company efficiency, thus maximizing profits. This on-line interactive system will help your company reduce inventory and overtime and increase cash flow, customer service, and direct labor output. PROFITKEY provides the tools for master scheduling, materials requirements planning, shop floor control, and purchasing and the supporting financial and accounting functions.

PROFITKEY is a transaction-driven, user-oriented system that provides four exclusive displays, as follows:

- The MASTER SCHEDULER'S WORKBENCH® display provides the tools to develop and change the master schedules, forecasts, and planning bills as required.
- The PLANNER'S WORKBENCH® display provides the tools to firm, release, and reschedule orders and to inquire for the status of any requirement, order, item, or bill of material.
- The DISPATCHER'S WORKBENCH® display provides the tools to inquire and update operations, routings, and work center loads.
- The PURCHASING WORKBENCH® display provides the tools to inquire and update purchasing and vendor information.

PROFITKEY will run on any hard disk system using Ryan McFarland COBOL, including microcomputers.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$6000 - \$32,000

Contact: W. W. Dockins
(305) 743-7400

KEY SYSTEMS, INC.

P.O. Box 1319

Marathon, FL 33050

PROMIS (Process Management Information System)

Operating System: VMS

Keywords: • Decision support • Engineering
• Production control

This complete computer-aided engineering and production system for semiconductor manufacturers provides process and recipe management, production and inventory planning and control, routing and tracking of work in process, production reporting, facilities monitoring and control, and direct automated interfaces, using SECS protocols to production and test equipment.

Engineering analysis tools include frequency distribution reports for engineering data, trend reports, correlation plots, performance charts, initialization reports, scatter plots, control charts, and facilities history plots. The production and inventory control system includes production scheduling, capacity planning and control, material planning and control, work center loading, priority planning and control of work in process, inventory control, and standard costing. What-if simulation allows users to predict the effects of proposed changes in product mix, required completion dates, expected yields, equipment capacity, standard lead times, overtime, number of shifts, and so on.

Reports are provided on planned versus actual completions, forecast versus planned completions, work in process, inventory, production activity, performance to schedule, throughput performance, yield variances, reworks, rejects, slow-moving lots, equipment availability, equipment usage, facility sensor current readings and limits, off-normal summaries, lot history analyses, and so forth.

A version of this product is available for the PDP-11 computer.

Price: \$70,000 - \$350,000

Contact: Doug Scott

(416) 364-5361

I. P. SHARP ASSOCIATES LTD.

2 First Canadian Place, Suite 1900

Toronto, Ontario M5X 1E3

Canada

Purchase Order Processing

Operating System: VMS

Keywords: • Accounting • Information management
• Inventory • Purchasing

This module processes purchase orders for mailing, tracks open commitments, records material receipts, and prints a variety of reports, including open P.O. summary, expediting, receiving, and cash requirements. The module can be operated independently or as part of a fully integrated system, interfacing automatically with one or more of the following: accounts payable, for matching invoices to purchase orders and reducing open commitments; inventory control, to increase inventory when material receipts are recorded and to show material on order on inventory reports; and job cost, to reflect open commitments and/or material receipts on job cost reports. Operation is fully interactive, with reports and video screen displays available on demand.

A version of this product is available for the PDP-11 computer.

Price: \$4000

Contact: Janna McMillan

(617) 275-5810

BREUER & CO.

54 Middlesex Turnpike

Bedford, MA 01730

QMS PROGRAMS™

Operating System: VMS

Keywords: • Quality control • Statistics

Distribution medium: magnetic tape.

This integrated set of computer program modules manages quality-control information, providing for the on-line collection, documentation, storage, reporting, and analysis of quality test and inspection results. Unique features include the PROTOCOL dialog, which allows

users to tailor any number of QC applications in a single system; data entry from a variety of devices, including a compatible automatic screen-generation module, EZDATA; interactive reporting and/or statistical analysis capabilities in a variety of user-controlled formats; on-line help messages; simulation capabilities that allow what-if games with new-product startups; and built-in graphics.

A version of this product is available for the PDP-11 computer.

Price: \$8000 - \$45,000

Contact: John Sivertson
(609) 924-7904

JOHN A. KEANE AND ASSOCIATES
575 Ewing Street, Research Park
Princeton, NJ 08540

RCS-7

Operating System: VMS

Keywords: • Petroleum • Process control • Real time

This real-time monitor and control system is suitable for SCADA and process control applications. Because of its generic design as a baseline system, RCS-7 is a good solution to monitor and control applications and for systems from PDP-11/23s to dual-redundant VAX-11/780 configurations. RCS-7 provides a user-friendly operator interface for non-programmer users and features color graphics user/machine interface, data acquisition and processing, alarms monitoring, event logging, supervisory control, on-line display generation and acquisition, and an applications interface.

The optional subsystems offer automatic failover for redundant configurations, a calculation processor, dot-addressable trending, and historical data collection.

A version of this product is available for the PDP-11 computer.

Price: \$15,000 - \$60,000

Contact: David J. Osina
(713) 666-2701

SGM, INC.
8830 Interchange Drive
Houston, TX 77054

RCS-7/32

Operating System: VMS

Keywords: • Data collection • Petroleum • Process control
• Real time

This real-time monitor and control system is suitable for Supervisory Control and Data Acquisition (SCADA) and process control applications. Because of its generic design as a baseline system, RCS-7/32 is not only a good solution to a wide range of monitor and control applications but also suitable for systems ranging in size from MicroVAX II to

large VAX configurations. RCS-7/32 is available in both single or dual systems for redundant configurations with automatic failover. RCS-7/32 functions as a sophisticated application executive to perform the real-time monitor and control functions while maintaining a user-friendly operator interface for nonprogrammers.

RCS-7/32 features a color graphics user/machine interface; a data acquisition interface to RTUs, programmable controllers, and other remote devices; data processing of acquired data; a configurable alarm monitoring/reporting mechanism; event logging; supervisory control; on-line, nonprogrammer-oriented display-generator and data base maintenance facilities; a comprehensive calculation processor; comprehensive historical data collection routines; and a programmer's application interface with debug facility.

Optional features include automatic failover for redundant configurations and dot addressable trending.

A version of this product is available for the PDP-11 computer.

Price: \$15,000 - \$60,000

Contact: David J. Osina
(713) 666-2701

SGM, INC.

8830 Interchange Drive

Houston, TX 77054

SAFES-2000

Operating System: MicroVMS, ULTRIX-32, VMS

Keywords: • Accounting • Order entry • Production control
• Purchasing

This full MRP II package offers BOMP, costing, inventory control, materials requirements planning, capacity requirements planning, work-in-process control, what-if facilities, order entry invoicing, sales analysis, accounting, and more. The DIGITAL version was developed from a product that has been installed in more than 700 companies. The system is written in Safe's own high-level language, Super-Opus. A compiler is available.

Installation parameters allow the system to be tailored to the user's needs. Training, on or off site, and installation support are available. Dealer inquiries are welcome.

Price: \$20,000 - \$70,000

Contact: Ken Jackson

(416) 826-5352

SAFE COMPUTING (CANADA) LTD.

2000 Argentia Road, Plaza 4, Suite 200

Mississauga, Ontario L5N 1W1

Canada

Salerno/SPM + (Statistical Process Monitoring)

Operating System: VMS

Keywords: • Quality control • Statistics

Salerno/SPM + is a centralized quality management system designed to automate the mathematical and managerial functions of statistical process control for an entire manufacturing facility. Designed for factory floor implementation, this menu-driven system provides an interactive, real-time environment for collecting, monitoring, and analyzing data for multiple processes simultaneously. Thus, once control limits are established, the system automatically displays a control chart and provides warnings of out-of-control conditions each time a subgroup of inspection data is entered. SPM + supports manual data entry and electronic data acquisition from gauges.

SPM + has powerful "sort and report" capabilities too. All you need to do is identify the process of interest and specify the date window. A data sort is usually accomplished in a matter of seconds. Then SPM + gives you a variety of analytical tools to select from: control charts, frequency distributions, process capability studies, estimates of the mean and the variance, hypothesis tests for mean and variance, and tests for normality.

SPM + is a tool for productivity. It will keep track of your efforts to improve a process, help determine the effectiveness of corrective actions, and reduce scrap, rework, and sorting.

A version of this product is available for the PDP-11 computer.

Price: \$18,000 - \$32,000

Contact: Tom Early
(313) 756-9292

SALERNO COMPUTER SYSTEMS
4175 East Ten Mile Road
Warren, MI 48091

SCOUT Materialwirtschaft

Operating System: VMS

Keywords: • Inventory • Materials handling • Purchasing
• Wholesale

This material-planning product is configured for German-speaking users in Austria, Germany, and Switzerland.

Price: Available upon request

Contact: Rainer Burken
(0761) 70799

DATANORM SOFTWARE GMBH
Kronenstr. 2-4
7800 Freiburg
West Germany

SCOUT Stücklistenwesen

Operating System: VMS

Keywords: • Bill of materials

This bill-of-materials product is configured for German-speaking users in Austria, Germany, and Switzerland.

Price: Available upon request

Contact: Rainer Burken
(0761) 70799

DATANORM SOFTWARE GMBH

Kronenstr. 2-4

7800 Freiburg

West Germany

SCOUT Zeitwirtschaft

Operating System: VMS

Keywords: • Materials handling • Process control
• Production control • Shop floor control

This product for shop floor control is configured for German-speaking users in Austria, Germany, and Switzerland.

Price: Available upon request

Contact: Rainer Burken
(0761) 70799

DATANORM SOFTWARE GMBH

Kronenstr. 2-4

7800 Freiburg

West Germany

Seaking

Operating System: VMS

Keywords: • CAD/CAM • Engineering
• Structural engineering

Memory required: 2MB. Distribution medium: 9-track 1600 bpi magnetic tape.

The Seaking system, written in FORTRAN-77, includes all the functions for preliminary ship design. A rough hull form is defined or selected from the Hull Library, which contains other preliminary hull forms or those of produced ships. All types of hull variations are possible. To check the hull, body and lines plans are drawn.

Seaking contains naval architect calculations, such as trim, intact and damage stability, loading conditions, hydrostatics, longitudinal stresses, grain moments, flooding, launching, and more. Those calculations are operated on both the preliminary hull and the final, faired hull.

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Price: SEK 200 000 – SEK 450 000

Contact: Henrik Krefting
+ 46 31 222025

SWEDCAD AB
P.O. Box 8010
Gothenburg S-402 77
Sweden

See Why

Operating System: VMS

Keywords: • Management • Materials handling • Scheduling
• Simulation

This system for visual, interactive, discrete event simulation is for users who want to experiment with the behavior of dynamic discrete systems. Applications range from distribution operations to assembly lines to communication systems to the staffing of service organizations. See Why enables users to communicate the performance of the system being simulated with the power of an animated visual display of the system. Many models of real-world complexity can be developed and run with the minimum configuration of 512K memory.

Written in FORTRAN, See Why provides routines for defining and manipulating the elements of the simulation. While the modeler manipulates the simulation elements logically, the See Why system automatically handles the manipulation of the visual display. Routines are also available for display enhancements, automatic or user-directed statistics collections, sampling from theoretical or user-defined distributions, and the construction of user-friendly model interactions.

See Why's interactive aspect allows for general model interactions for all See Why models. Interactions are available for complete simulation run control, including running with display on or off, for faster execution. The run may be interrupted at any time for further interactions. The complete state of the model may be saved to or restored from disk at any time. In addition, general interactions are available for inspecting and changing the simulation elements, including entities, attributes, and sets at any time during the run.

Price: \$31,700

Contact: Marketing Administrator
(617) 272-7333

ISTEL, INC.
83 Cambridge Street
Burlington, MA 01803

SETCON: Process Control Software for Industrial Processes

Operating System: MicroVMS, VMS

Keywords: • Graphics • Process control • Shop floor control

Memory required: 2MB. Distribution media: magnetic tape, RL02.

This data acquisition and control package, written in FORTRAN and developed for industrial computer applications, runs under real-time operating systems. SETCON has a memory-resident data base and uses an 8-color CRT as its main interface between the user and the process. Two levels of passwords are built into the package to protect the system from modifications by unauthorized personnel. Process control algorithms, history collection and trending, and a report subsystem are featured.

A version of this product is available for the PDP-11 computer.

Price: \$25,000 - \$60,000

Contact: Jorge Llansa
(713) 496-3220

SETPOINT, INC.
950 Threadneedle
Houston, TX 77079

SFC (Shop Floor Control and Job Costing System)

Operating System: VMS

Keywords: • Cost accounting • Production control • Scheduling
• Shop floor control

SFC is a comprehensive interactive system for routing, costing, and load determination. By maintaining files for customers, work centers, employees, and routings, the system enables the production department to record, analyze, and manage shop floor activity. Shop orders are entered by means of an on-line terminal with operator prompting. Transactions are entered against operations within a job, enabling the user to track the flow of the job through the shop floor.

The variety of transaction types permits distinguishing between setup and run operations and between standard and rework activity. Variances from setup and run-time estimates are calculated and used to compute the efficiency of both employees and work centers. Rejects and rework transactions are reported. Job Shop Control determines the shop load for up to 13 weeks and provides information about load hours by work center to assist in scheduling. Among the reports generated are a full set of master file lists, open job listings, job cost analysis, shop load and work center schedule reports, and a weekly report package consisting of direct labor analysis, work center utilization, and reject/scrap analysis.

1312 Manufacturing

Price: Available upon request

Contact: Linda M. Dobias
(617) 933-3780

WHITE HAT SYSTEMS, INC.
331 Montvale Avenue
Woburn, MA 01801

SFC (Shop Floor Control), MCBA, Inc.

Operating System: VMS

Keywords: • Report writer • Scheduling • Security
• Shop floor control

This stand-alone application is a comprehensive and practical shop floor tool for creating and monitoring shop orders and shop floor activity. In addition to interactive entry and editing of shop orders, SFC supports shop bills and shop routings; provides operation-level controls as well as forward, backward, and manual scheduling of shop orders down to the operation level; provides capacity requirements planning and exception reporting to highlight problem areas in the shop; records scrap and rejects; accommodates shop notes; records and accumulates actual material and labor hours used; prints a dispatch list; allows multiple shop orders to be directly connected to a job; supports a daily calendar in month-day-year format cross-referenced to shop days; interfaces to six other packages in MCBA's manufacturing system; and supports security and multicompany capabilities.

A version of this product is available for the PDP-11 computer.

Price: \$4000 - \$6000

Contact: Sales Representative
(818) 957-2900

MCBA, INC.
2441 Honolulu Avenue
Montrose, CA 91020

SIMAN

Operating System: VMS

Keywords: • Graphics • Simulation • Statistics

Distribution medium: magnetic tape.

This discrete-continuous, general-purpose simulation language contains advanced features for modeling manufacturing systems. SIMAN is written in standard FORTRAN, and block-diagram models can be augmented by user-written FORTRAN subroutines.

SIMAN has three modeling orientations: process, discrete event, and continuous. The process orientation is a block-diagram format, with different blocks for modeling material-handling systems, job shops, AGV systems, robotics systems, automated manufacturing cells, and more.

In addition to standard statistical output, SIMAN has graphical output in the form of character graphics. Bar charts, histograms, correlations, and so forth are easily constructed separate from the simulation run.

Price: \$7500

Contact: Lisa Pegden
(814) 238-5919

SYSTEMS MODELING CORP.
Calder Square, P.O. Box 10074
State College, PA 16805

SIMSCRIPT II.5

Operating System: ULTRIX-32, ULTRIX-32m

Keywords: • CAD/CAM • Language processors • Simulation

SIMSCRIPT II.5 is a well-established, standardized, and widely used language with proven software support. SIMSCRIPT II.5 reduces simulation programming time and cost compared to FORTRAN and is more efficient and flexible than interpretive simulation techniques, such as GPSS. This product gives the programmer and analyst an English-like language for describing and programming a model of the system under study.

Price: \$20,000 - \$25,000

Contact: Hal Duncan
(619) 457-9681

CACI, INC.
3344 North Torrey Pines Court
La Jolla, CA 92037

SOURCE/MFG

Operating System: VMS

Keywords: • Accounting • Financial management • Inventory
• Payroll

This on-line, interactive, and completely integrated modular manufacturing control, costing, and planning system is installed in three phases:

- Phase I: Control your manufacturing operation — inventory analysis, physical inventory, customer billing, work orders, labor reporting, material reporting, routings, net material requirements, multilevel bill of materials, and system control.
- Phase II: Cost your manufacturing operation — sales order processing, sales analysis, customer service, purchase order processing, inventory average costing, payroll processing, work order costing, work order budget reporting, and same-as-except-for routings.
- PHASE III: Plan your manufacturing operation — financial planning, master scheduling, material requirements planning, capacity requirements planning, same-as-except-for bill of materials, and new-product estimating.

In most companies, the accounting applications — accounts receivable, accounts payable, general ledger, asset accounting, statement printing, budget printing, and schedule printing — may be installed at any time and therefore are not included in any specific phase. Since the system is modular, you may choose different applications within a phase for your installation.

A version of this product is available for the PDP-11 computer.

Price: \$10,000 – \$100,000

Contact: Peg Chapla, Product Line Manager
(415) 798-0240

COMPUTER SYSTEMS DEVELOPMENT, INC.
300 Ellinwood Way, Suite 160
Pleasant Hill, CA 94523

SPC (Standard Product Costing), MCBA, Inc.

Operating System: VMS

Keywords: • Cost accounting • Purchasing

This comprehensive interactive tool accurately maintains standard or estimated costs for both manufacturing and accounting management. SPC keeps up-to-date current costs for all products, parts, and services provided by a company. Deviations of current costs from planned objectives are identified for management. Since SPC is integrated with MCBA's Inventory Management and Standard Product Routing packages, labor and material figures are automatically kept consistent.

SPC speeds installation by creating the initial cost master file automatically from the item master file; maintains two sets of costs: beginning-of-the-year cost projections (standard) and up-to-date (current) costs; maintains value-added costs at each level of the bill of material and accumulates costs from lower levels of the bill of material; separates both standard and current costs into material, labor, fixed burden, and variable burden; handles multiple departments and work centers with flexible, user-defined tables to define overhead, labor grades, locations, job and cost types, and various status codes; calculates labor for each operation for each item, using the standard routing; uses the current bill of material to build up costs for user-selected items; provides costed bill of material reports in single-level, indented, and summarized formats; provides critical ratios such as gross margin percentages and cost variances; facilitates what-if cost analysis; highlights current purchase prices deviating from the standard material costs on the Purchase Price Variance Report; replaces standard costs with current costs for all or selected items; interfaces to four other MCBA packages; and supports multiple companies and password security.

A version of this product is available for the PDP-11 computer.

Price: \$2500 – \$4000

Contact: Sales Representative
(818) 957-2900

MCBA, INC.
2441 Honolulu Avenue
Montrose, CA 91020

Spider II Manufacturing Planning and Control System

Operating System: UNIX* (System V)

Keywords: • Cost accounting • Inventory • Production control
• Shop floor control

This fully interactive closed-loop manufacturing control system encompasses production planning, production control, material planning, material control, and cost control. The system's modular approach allows the user to purchase only the applications required. Spider II can also expand into a fully integrated accounting and manufacturing system.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$3300/module – \$7500/module

Contact: Uniq Sales Department
(312) 879-1008

UNIQU DIGITAL TECHNOLOGIES
28 S. Water Street
Batavia, IL 60510

SPR (Standard Product Routing), MCBA, Inc.

Operating System: VMS

Keywords: • Maintenance • Process control
• Production control • Report writer

This package creates, maintains, and reports data describing operations, tools, and notes used in standard product manufacturing. SPR, sometimes referred to as the bills of labor package, is oriented toward small to medium-size repetitive manufacturers (make-to-stock/assemble-to-order) and small to medium-size job shops (make-to-order/engineer-to-order).

SPR takes advantage of space-saving techniques, such as general routings and specific routings. General routings are subsets of operations, tools, and notes that are common to more than one product. Specific routings identify sets of operations, tools, and notes that are used to manufacture products. In SPR, several products or items can use the same routing. Specific routings are complete routings (the route or path a shop order travels when being manufactured) and can incorporate general routings.

SPR accesses all features through menus. SPR can also allow interactive entry and editing of routing data and provide for alternate routings; maintain labor standards at the operation level; support "same-as-except" routings, a way of easily creating a new routing by copying another, and allow routings to be copied into a shop order in MCBA's shop floor control package; support many operation types, including productive (most common), setup, move, rework, and so on; provide routings for multiple locations for each item, tooling information control, and standardization of multiusage operations; facilitate higher accuracy of standards by allowing user-specified location of the decimal point in critical fields; support the user in tailoring standard hours, by piece, by 10 pieces, by 100 pieces, and so on, or n pieces an hour; store notes by operation, which can be used for operational instructions; print routing sheets, routing summary sheets, and the general routing usage report; interface to four other packages in MCBA's Manufacturing System; and support multicompanies and password security.

A version of this product is available for the PDP-11 computer.

Price: \$1500 - \$2500

Contact: Sales Representative

(818) 957-2900

MCBA, INC.

2441 Honolulu Avenue

Montrose, CA 91020

Systems for the Manufacturing Company

Operating System: MicroVMS, VMS

Keywords: • General ledger • Inventory • Purchasing
• Shop floor control

This closed-loop, on-line, fully interactive manufacturing control system consists of 11 modules: Product Definition, Purchasing/Receiving, Production Control, Inventory Control, Material Planning, Production Planning, Accounts Payable, General Ledger, Accounts Receivable, Order Processing, and Sales Analysis. The modules can be implemented individually for stand-alone capability or as a whole for an interactive MRP II/Financial system.

System highlights include immediate access to on-screen instructions and user-maintained additions to on-screen instructions. Table entries can be displayed if a reminder is needed during data entry. Control is also included for multiple companies, divisions, and facilities.

An on-screen glossary of more than 500 terms and concepts can be expanded to include any user-specified terms. The user can access information by entering the first letters or numbers of the subject title.

For non-English-speaking users, up to four languages can be installed on one system. Multiple-currency control permits internal accounting in the native currency while generating invoices and other forms in a foreign currency.

An easy-to-use report spooler displays reports on the screen for browsing. Hard-copy printing may be started on any page. Sort options are available for screen inquiries and reports. Examples include item/part number, description, product code, model number, tool description, customer name, and zip code.

The system is documented and includes on-line help and query functions. Maintenance and support programs include a toll-free dial-in hot-line telephone number. On-site or classroom training and continued software enhancements to the operating system and application software are included.

Price: Available upon request

Contact: Kevin E. Roberts

(714) 837-3744

DBSI INFORMATION SYSTEMS, INC.

25431 Cabot Road, Suite 110

Laguna Hills, CA 92653

TEC Manufacturing System

Operating System: VMS

Keywords: • Accounting • Distribution

• Financial management • Information management

TEC supplies manufacturing management and financial control systems to discrete manufacturers and job shops. TEC's proprietary software automates inventory control, bill of materials, production control, materials requirements planning, purchasing, order entry/invoicing, sales analysis, accounts receivable, accounts payable, general ledger, and payroll. The system is modular, on line, and fully integrated. TEC Manufacturing System is sophisticated yet easy to use.

ENGLISH, TEC's data retrieval language, allows the user to ask questions of the system and to obtain instant answers either on a terminal display or on a printer. Also available is a prospect tracking system that maintains information on customers and prospects.

A version of this product is available for the PDP-11 computer.

Price: \$3500 - \$9000

Contact: S. A. Levine

(617) 964-3890

TEC COMPUTER SYSTEMS, INC.

30 Tower Road

Newton, MA 02164

TIP (Tankage Inventory and Yields Programs)

Operating System: VMS

Keywords: • Chemical • Inventory • Petroleum
• Report writer

This interactive inventory, transfer accounting, and yield system is designed for refiners and petrochemical companies. TIP provides inventory, yields, and transfer accounting reports within minutes.

Data entry is error-checked at entry time to provide inventory reports at the rate of 3 seconds a tank and transfer reports at the rate of 13 seconds a transfer, entry time included. For a 100-tank refinery, the total process takes about 25 minutes a day. Using the optional AID report writer, nonprogrammers can design and run custom reports with two hours of training.

A version of this product is available for the PDP-11 computer.

Price: \$10,000 - \$14,000

Contact: W. G. Welter
(713) 373-1905

ADVANCED MANAGEMENT TECHNOLOGIES

P.O. Box 71

Cypress, TX 77429

TMS/2000 Tool Management System

Operating System: VMS

Keywords: • Inventory • Materials handling
• Metals • Scheduling

TMS/2000, an inventory management system for the metalworking industry, controls cutting tools and processes the issue, tracking, and return of cutting tools from the tool storeroom. TMS/2000 issues packages of tools for specific manufacturing tasks, such as bill of tools. The bill of tools function allows planners to check the inventory status of all tools on the bill of tools prior to scheduling the job. Programs for allocation, issue, and return of the bill of tools make handling of BOTs easy and efficient.

TMS/2000 checks inventory levels in the tool crib. When inventory levels reach reorder point, the system generates a requisition of tools to be ordered, by vendor. Once a purchase order number is assigned, TMS/2000 tracks the purchase order until received.

A complete menu of management reports is available for tracking and managing inventory. DATATRIEVE is the report generator and creates additional reports.

A version of this product is available for the PDP-11 computer.

Price: \$28,500 – \$68,500

Contact: Ronald C. Hutton, Sr., Systems Sales Manager
(215) 797-6600

STANLEY VIDMAR INC.

Division of The Stanley Works

11 Grammes Road, P.O. Box 1151

Allentown, PA 18105

UCC-APT (Automatically Programmed Tools)

Operating System: VMS

Keywords: • CAD/CAM • Graphics

This system can be used for programming point-to-point and multiaxis contouring applications on mills; machining centers with three, four, or five axes; lathes, including four axes; drills; punch presses; flame cutters; and EDM machines. UCC-APT is available in two upward-compatible configurations. The intermediate level provides the capabilities to program cutter motions relative to 2-dimensional geometry in any nonvertical plane plus a series of enhancements and programming aids to simplify the logical requirements of more elaborate part configurations. The advanced level provides geometric definitions, BSURF or RLDSRF for nonanalytical situations, and, if required, a general conic or quadric definition. Another surface, TABCYL, provides a 3-dimensional curve in space. FORTRAN-like looping commands are also included to simplify the process. The advanced level keeps the cutting tool tangent to a part at all times.

The optional Lathe Module can be added to any level of UCC-APT. This module simplifies programming for lathe parts by using short-cut, shop-type terminology to reduce the coding effort. Roughing, threading, and finishing routines are provided. Optional utilities are also available to punch, read, and verify NC tapes and plot-cutter paths.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Ron Hunt

(214) 655-8930

COMPUTER INTEGRATED MANUFACTURING CO.

1930 Hi Line Drive

Dallas, TX 75207

UCC Materials Management System

Operating System: VMS

Keywords: • Accounts payable • Bill of materials • Inventory
• Purchasing

This on-line, menu-driven, integrated materials management system is composed of five distinct yet fully integrated modules: Purchasing, Receiving, Invoice Auditing, Stores, and Bill of Material. The data base concept ensures that all modules communicate consistent and current information to one another. The Purchasing module facilitates the creation of requisitions, of requests for quotations, and of purchase orders. The Receiving module uses purchase orders for receiving material. The Invoice Auditing module uses purchase order and receipt information to audit/pay invoices. The Stores module communicates requisitions and purchase order releases for stores material to Purchasing and updates inventory balances with receipt and issue (usage) data. The Bill of Material module is used to plan the acquisition of material for small maintenance jobs to large capital projects. Requisitions are communicated to Purchasing, and stores material can be reserved and/or issued.

System features include a wide range of daily, weekly, monthly, and quarterly reports; an on-line history of transactions for research, analysis, and problem solving; a batch interface with independent accounting/computer systems; and editing of numeric input and validation of selected input data.

Price: \$75,000 – \$400,000

Contact: J. C. Thomas

(203) 794-5154

UNION CARBIDE CORP.

Old Danbury Road

Danbury, CT 06817

UDS Job Costing/Work in Process

Operating System: VMS

Keywords: • Accounting • Inventory • Production control
• Project management

Sifting through the maze of records pertaining to an active job is simplified by this module, which uses submodules and programs that place the important details at your disposal on a regular basis. Five submodules — labor ticket processing, parts, list of materials, operation sheets, and parts inventory — offer the following features:

- A work-in-process (WIP) record is created for each open order. The entry that creates that record references the list of materials (LOM) for the ordered item to build a record composed of labor, operations, and parts. Previous part costs and labor costs, based on standard operation times, are used to establish job cost estimates. An LOM, operations listing, and purchasing LOM (which combines like items) are printed. This program allows a list of materials with up to five levels of indentation.
- The file is then sorted, and the WIP file is updated with new information.

- Input to the work in process is provided through the labor ticket, accounts payable, and inventory transactions. Updates occur after a transaction register is printed.
- Reports include WIP, job status, and exceptions (where actual exceeds estimate).
- Changes are permitted to individual work-in-process records.
- Also available are programs to calculate WIP month-end costing for both complete and partial shipments, with posting to the WIP header.
- A CRT display shows the status of any shop order.
- A labor efficiency report highlights the performance of employees against job standards.
- If job requirements change, the job can be updated through an "explosion" process that retains current cost data while allowing new or changed entry items to be added.

A version of this product is available for the PDP-11 computer.

Price: \$2500 - \$7000

Contact: Zane R. Oaks, Marketing Manager
(513) 890-1800

PROJECTS UNLIMITED, INC.

P.O. Box 14538

Dayton, OH 45414

Versa-Print Label System

Operating System: VMS

Keywords: • Chemical • Pharmaceutical • Printing
• Warehousing

This label-printing system satisfies the product-labeling requirements of manufacturers and distributors. For companies that must comply with changing state and federal regulations regarding label contents information, the system features maintenance ability for label text, various character heights and widths, and many character-printing features.

Label text is maintained in two files: the standard paragraph file and the standard product/contents file. The standard paragraph file stores standard label data that will be printed regardless of the product-specific information. The product/contents file stores product-specific information. Label text placement is defined through the label layout facility. You may reference up to 30 standard paragraphs or product/contents records with specific label positioning for each label. Label printing is accomplished by simple entry of the name of the label and the quantity to be printed. You may even stack the label names and quantities to be printed so that the system can be left unattended during the print operation. The system comes with documentation for installation and operation.

Price: \$5800

Contact: Sales Department
(201) 884-0892

INTEGRATED SYSTEMS, INC.

170 Algonquin Parkway, P.O. Box D
Whippany, NJ 07981

Viking Form

Operating System: VMS

Keywords: • CAD/CAM • Engineering
• Structural engineering

Memory required: 2MB. Distribution medium: 9-track 1600 bpi magnetic tape.

Viking Form is the CAD/CAM package for fairing the hull form of a ship and for defining production curves, which are also used in the fairing process. Extensive drawing possibilities are included in the package, permitting the hull to be drawn from every projection. Arbitrary curves can also be made to intersect with the hull, giving resulting curves used for further calculations or plotting. Viking Form is written in FORTRAN-77.

Price: SEK 180 000 – SEK 250 000

Contact: Henrik Krefting
+ 46 31 222025

SWEDCAD AB

P.O. Box 8010

Gothenburg S-402 77

Sweden

Viking Hull Production

Operating System: VMS

Keywords: • CAD/CAM • Engineering
• Structural engineering

Memory required: 2MB. Distribution medium: 9-track 1600 bpi magnetic tape.

Viking Hull Production, written in FORTRAN, performs the services that relate to the production of the hull of a ship. Those functions include development of shell plates, including steel ordering information, plots of developed plates, and punched paper tapes for direct N/C cutting of plates. The system handles the bending and generation of longitudinals and cutouts. Generation of any cutout in frames is a result of the previously generated longitudinals. The system also produces templates for the bending of the shell plates and calculates heights of assembly jigs.

Price: SEK 180 000 – SEK 250 000

Contact: Henrik Krefting
+ 46 31 222025

SWEDCAD AB

P.O. Box 8010

Gothenburg S-402 77

Sweden

VIP/80

Operating System: VMS

Keywords: • CAD/CAM • Engineering
• Mechanical engineering • Numerical control

Memory required: 2MB. Distribution medium: 9-track 1600 bpi magnetic tape.

This graphic interactive system is for part generation, nesting, cutting-sequence definition, and production of punched paper tapes to control N/C flame cutting machines. The part-generation facility, written in FORTRAN-77, contains more than 100 functions, including a macro facility, to make work quick and smooth. Nesting uses automatic positioning functions for a low scrap percentage. The final result of VIP/80 is generated in internal VIP/80 code. Then a postprocessor is attached to generate the punched paper tape. Several postprocessors exist, and VIP/80 can control any cutting machine. VIP/80 also produces necessary workshop information, such as cutting statistics and plottings.

Price: SEK 250 000 – SEK 450 000

Contact: Henrik Krefting
+ 46 31 222025

SWEDCAD AB

P.O. Box 8010

Gothenburg S-402 77

Sweden

Welding Arc Time Program

Operating System: VMS

Keywords: • CAD/CAM • Production control
• Shop floor control

This program provides welding arc times for manual, semiautomatic, and automatic welding processes. The program calculates the welding process time, based on the geometry of the joint and the electrode characteristics. The program also calculates the frequency of electrode change.

Price: \$9000

Contact: Kjell B. Zandin or Mary T. Coughlin
(412) 963-8100
H. B. MAYNARD & CO.
235 Alpha Drive
Pittsburgh, PA 15238

WWRAP (Wire Wrapping for Semiautomatic Machines)

Operating System: VMS

Keywords: • CAD/CAM • Electrical

This interactive general-purpose program produces control media for semiautomatic wire wrapping machines. Output for other wiring applications, such as Stitch-wire, Quick Connect, and Multiwire, can also be produced.

Data may be entered directly through the keyboard of the VDU when in the interactive mode; or, the program can be interfaced to access data from a CAD-produced file. The program is menu driven, so an individual needs no prior knowledge of computers or programming to achieve successful results. Powerful editing facilities are available.

The package also comprises a master file in which the geometric definitions of sockets and complete boards in constant use can be stored. The storing of standard board geometry in the master file and the format of data entry are compatible with the program AWRAP for Gardner-Denver 14FV and 14FS automatic wire wrapping machines.

Program features include level assign; point-to-point, right-angle, or routed wiring; area routing using NOGO areas, channels, and routing points; IC pin/board location cross-reference; master file for storing standard boards and ICs; plot of board geometry and IC placement; choice of wiring machine control media; wrap count and wire length summary; string list or from-to input; single and twisted-pair wiring; wire grouping and choice of wiring order; and inch/metric input and output.

A version of this product is available for the PDP-11 computer.

Price: £12,500

Contact: K. E. Cole
(0905) 53335

STAVELEY COMPUTING
Blackpole Road
Worcester WR3 8TH
England

Media



Ken Robert Buck/The Picture Cube

BASIS Newspaper Library

Operating System: VMS

Keywords: • Data base management • Information management
• Text management

This interactive, user-oriented, on-line information storage and retrieval system possesses superior text-searching capabilities. Functions include term and phrase searching through inverted indexes and variable-length data elements and records; remote access from bureaus by reporters or in house on line; elimination of marking, clipping, filing, or manual searching by library staff; greater control over indexing strategies; a centralized data base that can be leased to outside sources for revenue; an easy-to-use query language; free-text and keyword indexing; several security types and levels; on-line editing; sort options; and full article display on either the terminal or hard-copy printout.

BASIS Newspaper Library allows the user to define new applications and begin loading data within a few days. No computer programming is required for most implementations.

Price: \$15,000 +

Contact: BASIS Coordinator
(800) 328-2648

BATTELLE SOFTWARE PRODUCTS CENTER
505 King Avenue
Columbus, OH 43201-2693

BRLLP (Print-Out Braille Conversion Program)

Operating System: VMS

Keywords: • Presentation aids • Printing

Memory required: 14KW.

The cost of commercial Braille line printers can range up to \$20,000. Therefore, potential users who are blind or employers of the blind may be interested in the short FORTRAN Braille-Generating Program. Three-ply paper can be used on a DECwriter, or two-ply paper can be used on an impact drum printer to receive the Braille output when the period character is embossed. The multiply paper provides enough cushioning to produce a light but readable Braille, without the need for expensive modifications to existing output equipment. DECUS number 11-509.

A version of this product is available for the PDP-11 computer.

Price: \$5 - \$225

Contact: DECUS (see Introduction)

CJ/CIRCULATION™**Operating System:** VMS**Keywords:** • Billing • Data base management • Distribution
• Mailing lists

This comprehensive circulation information system provides the full range of subscriber service and distribution functions for the newspaper industry. The system features complete subscriber maintenance and service; route status, routing, maintenance, and accounting; full PBM processing, billing, and mailing labels; maintenance of carrier information and accounts, draw history adjustments, and current and future draws; press run processing and press predictions, flexible truck manifests, bundle labels, zoned inserts, and nonsubscriber delivery of target market coverage publications; and full carrier accounting, billing, bonding, and receivables reporting. All functions are integrated into one data base, eliminating any batch interfacing among the various modules.

Price: \$45,000 – \$80,000**Contact:** Dave Sloan

(813) 872-9990

COLLIER-JACKSON, INC.

3707 West Cherry Street

Tampa, FL 33607

CMS-11 (Circulation Management System)**Operating System:** VMS**Keywords:** • Mailing lists

This complete subscription fulfillment software includes ABC/BPA reporting, financial reports, and promotion analysis.

A version of this product is available for the PDP-11 computer.

Price: \$10,000 – \$30,000**Contact:** Paul B. Webster, President

(213) 577-7433

ALCOR FINANCIAL SERVICES, INC.

1981 E. Locust Street

Pasadena, CA 91107

CMS (Cable Television Management System)**Operating System:** VMS**Keywords:** • Billing • Broadcasting • Data base management
• Telecommunications

This interactive on-line system for cable television system operators is built around a Subscriber Master File for adding, changing, deleting, or listing subscribers. A Subscriber List may be obtained in total or on a selected basis — type of service, installation date, paid-through date, method of payment, and geographic location.

The system capabilities include an alphabetical listing of subscribers, automatic assessment of monthly and yearly charges for any number of basic or pay TV services, bank draft preparation for each bank for bank draft subscribers, interactive entry and editing of new charges and payments, printing of past-due notices for delinquent subscribers, generation of statements for selected subscribers, account status on video terminal and obtaining a printed copy on request, printing of welcome letters and subscriber account cards on request, and tracking converter serial numbers by subscriber.

The system generates reports and a charge/payment register by late charges, disconnect, street, daily cash receipts, weekly, and installer's productivity. The system also interfaces with addressable converters and taps manufactured by a number of major suppliers to the cable television industry, including Jerrold, Scientific-Atlanta, Pioneer, and Magnavox.

A version of this product is available for the PDP-11 computer.

Price: \$15,000 +

Contact: Larry Edwards, President
(803) 297-9290

BUSINESS SYSTEMS, INC.
One Marcus Drive
Greenville, SC 29615

DataTimes

Operating System: VMS

Keywords: • Data base management • Information management
• Library science • Research

DataTimes accesses the computer library files of newspapers. Publishers use this data base for in-house research and for revenue production by allowing commercial access, both corporate and individual, on a fee basis. The data base contains current and historical data on news, sports, legislation, and publicly held companies. The subset Electronic Communication Services includes electronic press release capability, electronic mail, traffic watch, and a financial hot line for commercial users. SportsTrak calculates individual and team statistics from statewide reporting events on every level. Price for SportsTrak is separate from DataTimes and depends on circulation.

DataTimes features valuable background information for reporters and editors using terminals at their own desks, remote access to the library from bureaus through dial-up portable terminals, the ability to file and find clippings quickly and easily, and a centralized data base that can be sold on a fee basis to outside sources, producing additional revenues.

Price: \$37,500 – \$80,000

Contact: William R. Paschal, Jr.
(405) 843-7323

DATATEK CORP.
818 N.W. 63rd
Oklahoma City, OK 73116

Dow Jones® for VAX-11

Operating System: VMS

Keywords: • Banking • Financial analysis
• Financial management

Distribution media: RX01, TU58 DECtape II cartridge.

This program provides an enhanced user interface to access the Dow Jones News/Retrieval® service. The alternate keypad of the VT100 is used to select the desired function. The TYMNET or TELENET phone number is automatically dialed, and the user is automatically logged into the Dow Jones News/Retrieval system.

Access to and use of the Dow Jones News/Retrieval service is subject to a separate agreement with Dow Jones and Company and must be made directly with Dow Jones. The customer is responsible for all fees incurred from Dow Jones, including CPU time and membership fee requirements.

The Dow Jones News/Retrieval functions include Dow Jones news; current-day quotes on common and preferred stocks and warrants, corporate and foreign bonds, options, mutual funds, and U.S. Treasury issues; historical quotes on common and preferred stocks and warrants; *Wall Street Journal* highlights; "Wall Street Week" transcripts; Corporate Earnings Estimator™; Weekly Economic Update™; Money Market Services; and more.

Note: The software product will support only one concurrent user for each terminal line and modem. Proper screen operation requires the use of VT100 terminals.

Refer to SPD #A1.56.xx when requesting further information on this product from your local DIGITAL sales office.

Dow Jones® and Dow Jones News/Retrieval® are registered trademarks of Dow Jones and Company, Inc. Corporate Earnings Estimator™ and Weekly Economic Update™ are trademarks of Dow Jones and Company, Inc.

Price: \$1000 – \$1500

Contact: Consult your local DIGITAL sales office (see Introduction).

Estimating

Operating System: VMS

Keywords: • Printing

This printing estimating system produces a complete estimate on sheet or web presses and on folding, saddle stitching, perfect binding, cutting, shrink-wrapping, stripping, camera, and proofing operations. The system interacts with a data base maintained by the user. Hours, dollars, and material reports are included.

A version of this product is available for the PDP-11 computer.

Price: \$15,000 - \$50,000

Contact: Joel Saren

(603) 893-9701

STANDEX INTERNATIONAL CORP.

6 Manor Parkway

Salem, NH 03079

FACS — Newspaper Circulation and Accounts Receivable

Operating System: VMS

Keywords: • Accounts receivable • Billing • Printing

This comprehensive newspaper distribution system centers on the Total Market Coverage (TMC) concept. The software combined with the FACS Newspaper Accounts Receivable system and the rest of the FACS general accounting packages will give any small to medium-size newspaper a complete financial management system. The system features interactive components that include subscriber, carrier, and district manager name and address files, full production reporting, draw calculation, carrier billing, and carrier promotions; conformation to Audit Bureau of Circulation (ABC) standards; ten demographic codes in the subscriber master file; automatic restarts for subscriber interrupts and automatic stops on expiration date; a mail subscriber capability and user-defined reporting capabilities with selectivity; and carrier A/R handling.

The FACS Newspaper Accounts Receivable package features generation and proofs for invoices, cash receipts, adjustments, month-end customer statements, and aged trial balance in addition to multiple sales analysis reports; multiple publication reporting (for example, daily, Sunday only, and weekly); multiple ad types (display, classified, national, and so on); individual customer contract maintenance; customer earned rate computation and customer activity inquiry; and credit reporting and customer late notices. All reports can be printed to the screen or to a hard-copy device.

A version of this product is available for the PDP-11 computer.

Price: \$7500

Contact: Steven L. Buth
(509) 624-4248

SPOKANE COMPUTER SERVICES, INC.
West 915 Second Avenue
Spokane, WA 99204

KEREN

Operating System: VMS

Keywords: • Accounting • Data collection • Inventory
• Printing

This third-generation printing management system is designed for the small, medium, or large-size printing or graphic arts-related industry. Applications include estimating/quotation, order entry, loading/scheduling, automatic data collection, work-in-process analysis, costing, productivity and profitability analysis, inventory, invoicing, accounting, sales analysis, and custom report generation. These applications are fully integrated and enable the user to customize the system.

KEREN features data base structured design, friendliness, ease of use, customization capabilities, integration, computer-generated intelligence, speed, custom-report generation, and touch-screen technology. Telephone hot-line, modem, and on-site support are provided, as well as ongoing classroom training and user groups.

A version of this product is available for the PDP-11 computer.

Price: \$10,000 - \$50,000

Contact: Mike Mellusi
(201) 574-0400

POLYCHROME CORP., SYSTEMS DIVISION
160 Terminal Avenue
Clark, NJ 07066

MACROCAT

Operating System: VMS

Keywords: • Documentation • Presentation aids
• Word processing

WCC MACROCAT software is designed for use in translating foreign-language documents. This product, developed for CAT (computer-aided translation), is a tool to be used by human translators to increase productivity during the translation process. Software is available to translate English to Spanish, German, French, Portuguese, and Arabic. Software is also available in the following language directions: Spanish to English, German to English, and French to English. Software to accommodate Italian and Japanese will be available soon.

The software produces printed output in draft or high-quality print form. As a turnkey system configuration, the system can accept manually keyboarded text, computer input, or OCR input. Final, edited output may be printed, stored on disk or tape, or routed to other computer processing systems. Translation output has been tested at over five times the rate of manual methods. Software is also available unbundled.

Key features are dictionary maintenance capabilities, unattended translation process, batch processing, and multilingual word processing (used for final text editing). The software is especially valuable for translating technical documents, product manuals, publications, product user documentation, and so forth.

A version of this product is available for the PDP-11 computer.

Price: \$16,000 - \$150,000

Contact: Chris Ferro

(312) 564-8122

WEIDNER COMMUNICATIONS CORP.

500 Skokie Boulevard

Northbrook, IL 60062

PUBCOM

Operating System: VMS

Keywords: • Data base management • Data entry • Inventory
• Warehousing

PUBCOM provides one data base for products (books, periodicals, and other media) and addresses (customers, salespersons, vendors, and employees). Users may select modules to perform order entry, invoicing, inventory control, warehouse control, payroll, cost accounting, catalog preparation, standing-order and subscription processing, mail lists, accounts receivable, accounts payable, general ledger, royalty accounting, and customer service.

Access to the system is through cathode ray tube (CRT) or hard-copy printer terminals. Output from the system includes CRT, hard copy, or magnetic tape. All devices may be in-house and/or remote from the central computer facility. In addition, the warehouse module uses on-line weigh scales to receive and identify products and to validate outgoing shipments.

Two years of transaction history are on line to answer customer service questions and to allow management analysis and reporting. Access to any transaction is nearly instantaneous.

Mnemonic abbreviations are used instead of traditional computer coding to represent products, names and addresses, and specifications, such as shipping methods and customer classifications. The result is extremely brief, fast, and accurate order input. In addition, requests

for information by the terminal are backed up by two levels of explanation that can be summoned by typing ? or ?? . Training is therefore easy and self-paced. Documentation is kept current.

A version of this product is available for the PDP-11 computer.

Price: \$10,000 - \$100,000

Contact: Howard Charles
(617) 685-3306

DEVICE DEVELOPMENT CORP.
5 S. Union Street
Lawrence, MA 01843

Scribe Subscription and Merchandise Fulfillment System

Operating System: VMS

Keywords: • Data base management • Information management
• Inventory • Report writer

Scribe supplies software as part of a turnkey hardware/software package to perform in-house on-line subscription and merchandise fulfillment for periodical publishers. Scribe covers the entire spectrum of circulation management tasks: order entry, invoices and renewal notices, accounting and marketing analyses, ABC and BPA audit statements, label sorting and printing, customer correspondence, back issues and article reprints, second-class postal reports, and more.

The system has been in use since 1977 by publishers of magazines, journals, newsletters, reference series, and some newspapers. More than 30 publishers with more than 500 publications now use Scribe systems. File size typically ranges from 5000 to 750,000 in an unlimited number of titles. The system is comprehensive, well supported, proven in the field, and easy to use.

A version of this product is available for the PDP-11 computer.

Price: \$80,000 +

Contact: Thorn Mead
(617) 491-5553

SCRIBE DATA SYSTEMS (A FAXON CO.)
222 Third Street
Cambridge, MA 02142

SMART Translator — English-Deutsch (German)

Operating System: MicroVMS, ULTRIX-32, VMS

Keywords: • Documentation • Translators

This program helps technical translators to translate English technical instructions into German. The program understands how to translate compound nouns for CAD/CAM, robotics, and engineering terminology.

Written in C, the program reads a UNIX* or word processor file and automatically translates the contents into German, sentence by sentence. Some postediting (10%) is necessary to add Germanic style.

The program can handle simple and complex sentences; German verb conjugation, including gerunds and negation; and proper nouns, adjectives, pronouns, German capitalization, phrasal verbs, and prepositions. The program provides automatic agreement of nouns, verbs, and adjectives by case, number, and gender; complete word reordering based on German syntax and grammar; placement of German prepositions; compounding of complex German nomenclature; and metric calculation. The program also resolves homonyms, synonyms, and engineering terminology. An optional module for metric conversion is available.

The 1-pass Smart Translator system permits multiuser access and can run in the background (batch), producing fast, accurate, consistent translation of highly complex material. The program can produce 100 pages a day, versus 3 pages by hand. Thus, human translator productivity is improved dramatically. The program produces automatic output with umlauts and driver codes for laser printers and phototypesetters.

This translator program is also available for \$2500 a month, including maintenance.

A version of this product is available for the PDP-11 computer.

Price: \$85,000

Contact: J. Smart

(212) 486-1894

SMART COMMUNICATIONS, INC.

655 Third Avenue, P.O. Box 963, FDR Station
New York, NY 10150

SMART Translator — English-Español (Spanish)

Operating System: MicroVMS, ULTRIX-32, UNIX* (Berkeley),
VMS

Keywords: • Documentation • Translators

This program helps technical translators to translate English technical instructions into Spanish for Spain and Latin America. Separate data bases are available for each Latin American country and standard Castillian. The program is used for translation of technical documentation and understands complex technical jargon for CAD/CAM, robotics, and engineering.

Written in C, the program reads a UNIX* or word processor file and automatically translates the contents into Spanish, sentence by sentence. Some postediting (5%) is necessary to add Spanish elegance and flair.

The program can handle simple and complex sentences; Spanish verb conjugation, including the verb "to be" and verb negation; and nouns, phrasal verbs, and sentence fragments. The program provides automatic agreement in number and gender for adjectives and past and present participles; automatic word reordering based on Spanish syntax and grammar; some styling; and vowel editing. The program also resolves homonyms and synonyms. An optional module for metric conversions is available.

The 1-pass Smart Translator can run in the background (batch), producing fast, accurate, consistent translations of highly complex material. The program can produce 100 pages a day, versus 3 pages by hand. The program produces output with accents and driver codes for laser printers and phototypesetters.

This translator program is also available for \$2500 a month, including maintenance.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$85,000

Contact: J. Smart

(212) 486-1894

SMART COMMUNICATIONS, INC.

655 Third Avenue, P.O. Box 963, FDR Station

New York, NY 10150

SMART Translator — English-français (French)

Operating System: MicroVMS, ULTRIX-32, UNIX* (Berkeley), VMS

Keywords: • Documentation • Translators

This program helps technical translators to translate English technical instructions and messages into technical French for Canada and France. The program understands complex technical jargon for CAD/CAM, robotics, and engineering.

Written in C, the program reads a UNIX* or word processor file and automatically translates the contents into French, sentence by sentence. Some postediting (5% average) is necessary to add French elegance and flair.

The program can handle simple and complex sentences; French verb conjugation, including the subjunctive, gerund, and negation; nouns; and phrasal and auxiliary verbs. The program provides adjective agreement in number and gender; past and present participles; automatic word reordering based on French syntax and grammar; and French styling and vowel editing. The program also resolves homonyms and synonyms. An optional module for metric conversions is available.

The 1-pass Smart Translator system permits multiuser access and can be run in the background (batch), producing fast, accurate, concise translations of technical material. The customized data base permits accurate, consistent translations of special terminology.

The program can produce 100 pages a day, versus 3 pages by hand. The program produces output with accents and driver codes for laser printers and phototypesetters.

This translator program is also available for \$2500 a month, including maintenance.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$85,000

Contact: J. Smart

(212) 486-1894

SMART COMMUNICATIONS, INC.

655 Third Avenue, P.O. Box 963, FDR Station

New York, NY 10150

SportsTrak

Operating System: VMS

Keywords: • Data base management • Information management
• Library science • Statistics

SportsTrak calculates individual and team statistics from statewide sporting events on every level. Basketball, football, and baseball statistics can be tracked statewide. Results are compiled and fed to a newspaper's front-end system, thus giving that newspaper the competitive edge.

SportsTrak can make your newspaper the leading sports information center for your market area.

Price: \$20,000 - \$45,000

Contact: Allen Paschal

(405) 843-7323

DATATEK CORP.

818 N. W. 63rd Street

Oklahoma City, OK 73116

Television Operations Systems

Operating System: VAX DSM

Keywords: • Accounting • Broadcasting • Order entry
• Payroll

This system provides complete television business operations on one CPU and includes order entry and inventory control (such as sales, traffic, and copy/continuity), log production, billing, accounts receivable, and collection management. Accounts payable, general ledger, and

payroll, all integrated and with EFT capability, are also offered. A separate module is included for connection to Western Union's EASYLINK system, which replaces a TWX machine. A tie-in to the Chryon VP-1 character generator, which creates broadcast-quality graphics and characters at one quarter the cost of stand-alone systems, can be provided.

The system has on-site password and security control. All modules are independent, menu driven, and easy to learn.

A version of this product is available for the PDP-11 computer.

Price: \$1000/mo - \$2000/mo

Contact: W. Lowell Putnam
(413) 786-2200

VIDEO COMMUNICATIONS, INC.
96 Industry Avenue
Springfield, MA 01104

WCC CAT (Computer-Assisted Translation and Multilanguage WP System)

Operating System: VMS

Keywords: • Documentation • Presentation aids
• Word processing

This system is designed for the foreign language translation of documents. Software is available to translate English to Spanish, German, French, Portuguese, and Arabic. Software is also obtainable in the following language directions: Spanish to English, German to English, and French to English. Available soon will be software accommodating both directions of Japanese, English, and Italian. Printed output is in draft or high-quality print form. The system can accept manually keyboarded text, computer input, or OCR input. Final, edited output may be printed, stored on disk or tape, or routed to other computer processing systems. Translation output has been tested at more than five times the rate of manual methods.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Robert Adams
(312) 564-8122

WEIDNER COMMUNICATIONS CORP.
500 Skokie Boulevard, Suite 270
Northbrook, IL 60062

The first of these is the fact that the
government has been unable to
obtain the necessary funds to
carry out its policy. This is due
to the fact that the government
has been unable to raise the
necessary funds to carry out its
policy.

The second of these is the fact that
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obtain the necessary funds to
carry out its policy.

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obtain the necessary funds to
carry out its policy.

THE GOVERNMENT'S POLICY

The government's policy is to
obtain the necessary funds to
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THE GOVERNMENT'S POLICY

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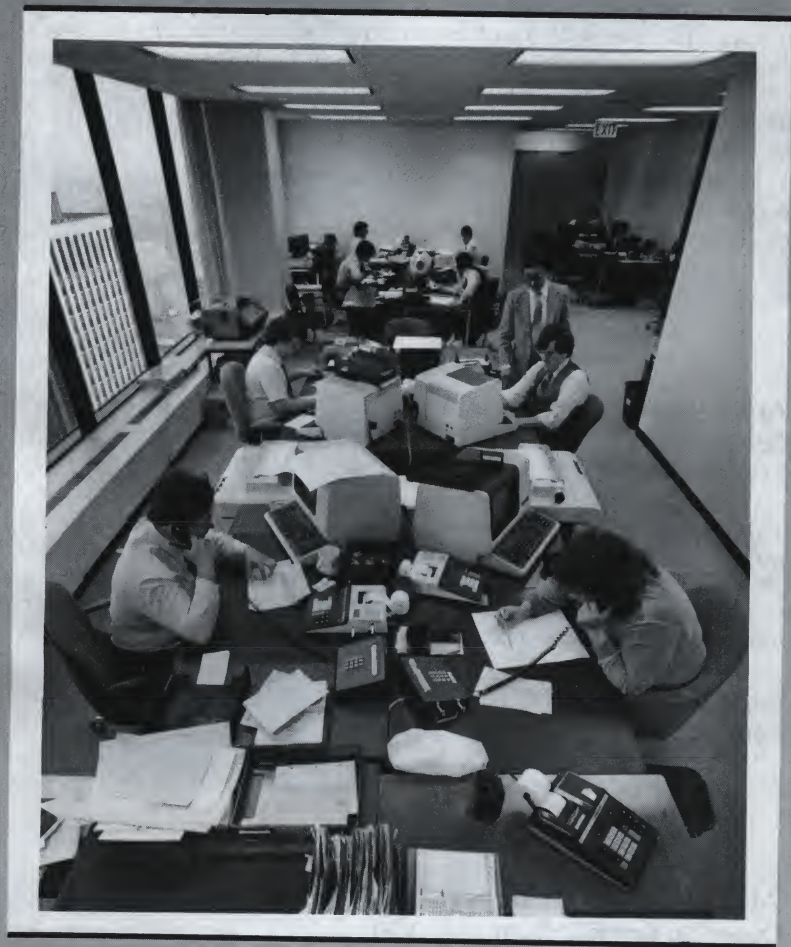
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Office Systems



Ellis Herwig/The Picture Cube

20/20

Operating System: MicroVMS, UNIX* (Berkeley), VMS

Keywords: • Decision support • Financial planning
• Scheduling • Spreadsheets

The "twice integrated" modeling program designed for the corporate environment, 20/20 integrates a powerful spreadsheet with graphics, data base management, text processing, and project scheduling. Then 20/20 is integrated again, into the corporation, by providing access to existing data bases and application packages. Superior graphics capabilities display graphs and spreadsheets simultaneously. The program is completely compatible with Supercomp-Twenty, Access Technology's electronic spreadsheet. Entire models can be transferred between 20/20 and Supercomp-Twenty, which is available on a variety of computers, including minis, micros, and mainframes. Both products are sold primarily to Fortune 1000 companies internationally.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: Available upon request

Contact: Janice M. Barry
(617) 655-9191

ACCESS TECHNOLOGY, INC.
6 Pleasant Street
So. Natick, MA 01760

Abax Mailing Label System

Operating System: VMS

Keywords: • Information management • Mailing lists
• Printing

This system prints pressure-sensitive labels for mass mailing and internal controls and supports an unlimited number of lists. The labels are printed in accordance with postal standards and are presorted for the best postal rates. The printed labels can be selected by number, name, street name, zip code, precinct number, or by a user-defined code.

A version of this product is available for the PDP-11 computer.

Price: \$400 - \$600

Contact: Charles R. McKown, President
(316) 663-5041

ABAX COMPUTER SYSTEMS
P.O. Box 1097
Hutchinson, KS 67504

ALL-IN-1

Operating System: MicroVMS, VMS

Keywords: • ALL-IN-1

The ALL-IN-1 multifunction office system products have a range of capabilities and the flexibility needed to solve a wide variety of business problems. ALL-IN-1 also provides a facility for integrating other business-oriented applications developed by customers, third parties, and DIGITAL.

ALL-IN-1 Office Menu Version 2.0 is a customizable menu-oriented software product that provides generic office applications, including calendar management, word processing, and electronic mail. With the addition of the WPS-PLUS/ALL-IN-1 Version 1.0 option and the DECspell option, ALL-IN-1 provides an administrative system with full-function word processing. Managers, secretaries, and technical professionals can easily create proposals and reports and can quickly disseminate critical information. The ALL-IN-1 System for Sales and Marketing Version 1.0 provides a sales department with a full set of applications, including lead tracking, pipeline analysis, and sales forecasting.

Price: Available upon request

Contact: Consult your local DIGITAL sales office (see Introduction).

ALL-IN-1 Office Menu

Operating System: MicroVMS, VMS

Keywords: • ALL-IN-1 • Electronic mail • Menu handlers

Distribution media: 9-track 1600 bpi magnetic tape, RA60, RK07, RL02.

ALL-IN-1 is a customizable, menu-oriented product offering generic office applications and a facility for integrating other business-oriented applications. ALL-IN-1 provides an environment in which users access applications in a consistent manner. Users' documents are stored in folders in file "cabinets" accessed from the office applications.

ALL-IN-1 Office Menu provides electronic mail, document processing, time management, communications, and desk management, including calendar and calculation. ALL-IN-1 Office Menu base system facilities include a flow control facility, a file cabinet, computer-based training and help, and a printing facility.

Refer to SPD #25.85.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$15,000 – \$22,500

Contact: Consult your local DIGITAL sales office (see Introduction).

ALP (Address List Processor)

Operating System: VMS

Keywords: • Data collection • Forms management • Recruiting
• Text management

Distribution medium: magnetic tape.

This processor performs on-line screen entry list maintenance and label/envelope/correspondence production and features list creation, address entry, duplicate-entry detection, and list extraction. Each list is created with an identifier and 12 data fields. The user can define additional data fields and their edit characteristics. ALP's benefits include easy maintenance of large mailing lists, automatic elimination of duplicates on command, and choice of subsets of list based on user-selected data fields.

Address records can be entered by keyboard to a formatted screen or from lists supplied on tape. Individual field editing is performed, including state abbreviation and zip code validation checking. Canadian and foreign addresses are accepted.

Lists may be removed to tape or separate files for backup. Address records may be individually updated, deleted, or displayed.

Labels can be printed 1-up, 2-up, 3-up, or 4-up. Labels can vary in size from plain white $\frac{7}{16}$ " \times 3" to shipping labels as large as 5" high. Continuous form envelopes may also be printed.

ALP creates a word processing list file for production of personalized correspondence and can merge this list with a form document to create the personalized output. ALP can also print calling cards, index cards, postcards, and much more. A user installation/instruction guide is included.

A version of this product is available for the PDP-11 computer.

Price: \$3000

Contact: Neal J. Anderson, Senior Product Specialist
(414) 784-8250

MCHUGH, FREEMAN AND ASSOCIATES, INC.
1135 Legion Drive, P.O. Box 454
Elm Grove, WI 53122

BDS (Bank Disbursements System)

Operating System: VMS

Keywords: • Accounts payable • Banking • Billing
• Purchasing

BDS, written in BASIC, facilitates the payment of vendor invoices in a banking institution by providing improved efficiency over the bill payment operation. Information entered into the system is edit checked for more accurate bill payment. Additionally, a complete audit trail is provided of all checks processed.

All checks are printed on continuous forms, using high-speed printers. The printed checks are designed to fit standard window envelopes.

Vendor names, addresses, and general ledger numbers are stored in files, allowing the operator to enter only a short code for the complete name, address, and G/L number. All data entered is checked for accuracy and is displayed for a second visual check.

All accounting entries are produced on a journal report detailing each entry by G/L number. Additionally, all accounting entries may be automatically allocated to a total of 36 cost centers. Detailed reports are prepared for all cost allocations.

Posting to the bank's general ledger can be in detail or in summary by G/L totals based on the accounting journal report. A complete audit trail is provided, indicating all data entered to the system.

All programs are controlled by two levels of passwords. Programs can be executed only from a menu.

A version of this product is available for the PDP-11 computer.

Price: \$3000 - \$5000

Contact: Salvatore Cangialosi, President
(212) 946-5796

PRIME ASSOCIATES, INC.

38 Paerdegat 7 Street
Brooklyn, NY 11236

Bridge/86

Operating System: ULTRIX-32, VMS

Keywords: • Communications • File management
• Personal computing • Printing

The Bridge/86 system is used primarily in office automation projects and for software development. Virtual microcomputing is available at every terminal attached to the mini. Thus, users may move to an LP/M, MS-DOS, or p-System environment that is tightly linked to other users. File storage, printing backup, and so forth are done at the host machine, yet the user sees a normal microcomputer environment. Thus, the system manager may provide personal computing as an option to current system users, without purchasing separate units.

A version of this product is available for the PDP-11 computer.

Price: \$500 - \$7500

Contact: Deryk Van Brundt
(415) 841-9594

VIRTUAL MICROSYSTEMS
2150 Shattuck Avenue #720
Berkeley, CA 94704

CFMS (Computerized Forms Management System)

Operating System: UNIX* (System III, System V)

Keywords: • Forms management • Inventory • Printing
• Purchasing

The CFMS system consists of five modules that cover specific forms management areas. Although the modules are independent, they are also compatible. Some users group individual modules into larger systems to maximize the potential operating efficiencies and associated dollar savings. The modules share advanced forms management concepts and software technology.

The Forms Management Module collects data on company forms, documents, and supplies and makes otherwise inaccessible data immediately available. This module also provides a standardized data base to identify duplication and promote consolidation, prevent miscommunication, promote cost reductions through ordering efficiencies, track and monitor forms activity, and help users understand total form requirements.

The Forms Control Module maintains inventory records for forms and supplies, accurately enforces proper form inventory levels, prevents out-of-stock situations, and limits premature ordering, excess storage costs, and so on. The module also identifies obsolete or superfluous forms, provides true current inventory values, and puts "teeth" into inventory management for forms.

The Forms Buying Module allows the user to standardize decision-making data and collect vendor information. This module also generates requests for quotations, purchase requisitions, and/or purchase orders.

The In Plant Printshop Module controls and monitors in-house print shops on a cost basis equivalent to that of outside suppliers.

The Records Management Module provides a systematic approach to establishing and controlling the available storage space, retention schedules, and record access management for forms once they are used and thus become records.

All modules include a flexible and sophisticated Report Generator (REPORTGEN), which presents accurate, clearly formatted information to management, based on data maintained by the system.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$15,000 - \$100,000

Contact: Steve Wallman, Vice President, Sales and Marketing
(312) 634-1120

COMPUTERIZED FORMS MANAGEMENT, INC.

350 Half Day Road

Prairie View, IL 60069

CrystalWriter™**Operating System:** ULTRIX-32, UNIX* (Berkeley)**Keywords:** • Word processing

This fast, efficient word processing system for secretaries, managers, writers, editors, and engineers coordinates standard document formats and standard documents in a multiuser office. CrystalWriter's plain English commands and clear, concise help and documentation are ideal for occasional users and make the system easy to learn and use. The speed, power, efficiency, and unique automated formatting on the screen are invaluable to the secretary. Direct telephone assistance helps with your special needs.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: \$795 - \$4995**Contact:** Catherine Hasting
(408) 727-6400

SYNTACTICS CORP.

3333 Bowers Avenue, Suite 145
Santa Clara, CA 95054**CT*OS Utilities Package****Operating System:** VMS**Keywords:** • Documentation • Software utilities
• Text management • Word processing

This set of utility programs for the CT*OS word processing system includes a list file sorter, an index restore utility, an index print utility, and a document repair utility:

- The CT*OS list file sorter lets CT*OS list processing users collate their list files into ascending or descending order on any field or combination of fields in the list.
- The CT*OS index print utility generates a listing of the CT*OS documents in a directory or account. The listing may be sent directly to a printing device or to a file. A printed copy is especially useful when making a backup of a word processing directory.
- The CT*OS restore index utility restores or creates a new CT*OS index file if the existing one becomes corrupt or is deleted.
- The CT*OS document repair utility provides a best-effort attempt at restoring an improperly filed document or a document that has become corrupt.

A version of this product is available for the PDP-11 computer.

Price: \$175 - \$500**Contact:** Paul Harris

(818) 796-9374

COMPU-TOME, INC.

234 East Colorado Boulevard
Pasadena, CA 91101

CT*OS Word Processing

Operating System: MicroVMS, VMS

Keywords: • Documentation • Menu handlers
• Text management • Word processing

This full-featured word processing software package, which emulates DIGITAL's WPS78 software, is a menu-driven system that includes spelling correction, list processing, user-defined keys, ASCII file transfer, scientific-character generation, and table of contents/index generation. Those features are supplemented with the more standard word processing functions, such as cut and paste, auto-word wrap, glossaries, and so on. CT*OS is written in MACRO-11, resulting in a CPU efficiency not often found in word processing systems.

A version of this product is available for the PDP-11 computer.

Price: \$950 - \$6500

Contact: Paul Harris

(818) 796-9374

COMPU-TOME, INC.

234 East Colorado Boulevard

Pasadena, CA 91101

Date*Book

Operating System: VMS

Keywords: • Information management • Project management
• Scheduling

Distribution medium: 9-track magnetic tape.

This calendar management system organizes and schedules time. Date*Book maintains an appointment calendar for each user and provides reminders of upcoming events by means of a tickler file. Date*Book is interactive, works on any terminal, and is user friendly but provides shortcuts for advanced users. Designed for the medical practice or business office, Date*Book can also be used to manage resources, such as conference rooms, computers, or other facilities and equipment.

Date*Book enables users to schedule new events or cancel or reschedule existing ones, automatically schedule a group meeting by finding a mutually available time slot for each person, and notify each member when a meeting is canceled or rescheduled. Each user's schedule is private. Users may request a listing of events for a given day, week, or month.

Date*Book uses simple commands, prompts the user for the next command, detects user errors, and provides understandable error messages and a help facility.

A version of this product is available for the PDP-11 computer.

Price: \$1000 - \$5000

Contact: Donald Rubin, President
(301) 982-1818

SYSTEMS ENGINEERING TECHNOLOGY INC.
10676 High Beam Court
Columbia, MD 21044

DECmail

Operating System: VMS

Keywords: • Electronic mail • Networking • Software utilities
• Telecommunications

Distribution media: 9-track 1600 bpi magnetic tape, RA60, RK07, RL02.

VAX DECmail is a stand-alone mail and filing system for creating, editing, sending, and processing messages on a single VAX computer system. The system can also store, search for, and retrieve messages held in system-provided or user-created folders. VAX DECmail memos and VAX/VMS (RMS) files can be moved between VAX DECmail and the RMS file system. Memos can be transferred to/from DIGITAL's word processing systems, using DX protocol.

VAX DECmail consists of a command interface, an editor, and a filing system. The command interface offers two modes of operation: menu mode for the new or infrequent user and command mode for the experienced user. Command mode allows the user to issue the same instructions that are available in menu mode but in a faster, abbreviated manner. Both modes offer extensive help facilities; explanations and directions are available for all menu items, menu item options, and command prompts.

Refer to SPD #25.64.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$12,000

Contact: Consult your local DIGITAL sales office (see Introduction).

DECpage

Operating System: VMS

Keywords: • Graphics • Printing • Text management
• Word processing

Distribution media: 9-track 1600 bpi magnetic tape, RA60, RK07, RL02.

This VAX/VMS layered product accessible through ALL-IN-1 or from the DECpage/VMS interface uses the LN01S laser printer, word-processed documents, and ReGIS-based graphics to produce high-quality text and graphics output without text markup or graphic arts skills. DECpage prints memos and letters, reports, directories, newsletters,

and overhead transparencies. DECpage supports all DECdx-format word processing systems, including DECmate I, II, and III; WS78; WS200; DECword; and WPS-PLUS.

DECpage uses variable-size characters, italics, and bold in a variety of proportionally spaced typefaces (fonts) on the LN01. DECpage reformats the input document by performing automatic font selection and text justification, based on the print style and keying conventions (bold, underline, and so on) selected by the user.

Refer to SPD #26.29.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$3000 - \$7500

Contact: Consult your local DIGITAL sales office (see Introduction).

DECspell Verifier/Corrector

Operating System: MicroVMS, VMS

Keywords: • ALL-IN-1 • Quality control • Software utilities
• Word processing

Distribution media: 9-track 1600 bpi magnetic tape, RX01, TU58 DECTape II cartridge.

This spelling verification and correction utility can automatically scan text documents or files, detect spelling errors, and offer a list of substitutions for the incorrectly spelled word and is offered with an 80,000-word American/English or British/English lexicon. VAX DECspell includes the Verifier/Corrector or Verifier Utility, which allows users to interactively verify and correct spelling; the Verifier/Corrector may be upgraded to allow users to verify documents against either lexicon. Also included is a personal dictionary formatter utility, which allows users to maintain, sort, format, and print their own dictionaries, and the lexicon data bases.

Refer to SPD #26.34.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$1850 - \$2775

Contact: Consult your local DIGITAL sales office (see Introduction).

DIGITAL's Electronic Mailroom

Operating System: VMS

Keywords: • Communications • Electronic mail

Distribution media: 9-track 1600 bpi magnetic tape, RL02.

This interface to the U.S. Postal Service's (USPS) Electronic Computer Originated Mail (E-COM)[™] system allows customers to directly transmit mail from their computer through electronic communication lines to any of 25 Serving Post Offices (SPOs) throughout the United States. E-COM software must be certified by the Postal Service in order to

transmit mail to any E-COM SPOs. DIGITAL's Electronic Mailroom automatically provides the necessary certification letters as part of the installation procedure.

The system supports E-COM's three basic message categories: Single Address Message (SAM), Common Text Message (COT), and Text Insertion Message (TIM). In addition, unique List Processing Message (LPM) and Salutation Message (SAL) capabilities are provided.

Refer to SPD #A2.30.xx when requesting further information on this product from your local DIGITAL sales office.

E-COM™ is a trademark of the U.S. Postal Service.

Price: Available upon request

Contact: Consult your local DIGITAL sales office (see Introduction).

DIGItex Word Processing System

Operating System: VMS

Keywords: • Spreadsheets • Text management
• Word processing

Distribution media; magnetic tape, RL02.

This word processing system is available as a single-user version or as a large multiuser system. DIGItex creates and maintains address and hyphenation files; administrates documents and standard text; creates and modifies text, using the comprehensive text editor; performs list processings, including text from standard text and address files; and supports print modules for Qume, Diablo, Olivetti, and DIGITAL printers.

In addition, DIGItex interfaces to the following program packages to support full implementation of an office automation strategy:

- DIGIsread, a fully integrated electronic spreadsheet calculator that facilitates combining textual data and tabular data in one document.
- DIGIttrieve, a system for retrieving documents, memos, reports, and correspondence in a user-defined filing system.
- DIGImail, a message-switching and distribution package available in networks consisting of Professional 300s, PDP-11s, and/or VAXs. Features include password protection, transmission and receipt of messages, use of distribution lists, an electronic file system, and a message retrieval system.
- DIGIsPELL, a spelling checker and dictionary that is user expandable to learn user-unique terminology.
- MEMO-11, a calendar system for appointment or conference scheduling in 15-, 30-, or 60-minute increments and automatic visual or audio reminder of approved schedules.
- TELTEX-11, a telex system for automatic transmission and receipt of telex messages. A document created by DIGItex may be immediately used as a telex message; telex messages may be received around the clock in unattended mode; and automatic dialing and answering facilities are provided.

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A version of this product is available for the PDP-11 computer.

Price: \$3500 - \$14,450

Contact: Robert L. Hirtle, Office Manager
(904) 433-7578

ATS DATA PROCESSING, INC.
1101 North 9th Avenue
Pensacola, FL 32501

Dreams

Operating System: VMS

Keywords: • Documentation • Electronic mail • Networking
• Text management

Distribution medium: magnetic tape.

This electronic mail system has been installed in a wide range of business and academic environments. Development of new capabilities is a continuing process, with support and updates for Dreams users. Dreams has been one of the pilot project mail systems in the developing EDUCOM-sponsored Mailnet network linking college electronic mail systems. Thus, easy accessibility to the network is ensured with Dreams.

The current version of Dreams is compatible with DECnet for message transmission to distant nodes and with MAILNET. EDT, DECword, WORD-11, TECO, or other editors can be invoked, with a smooth transition to and from the editor. A flexible method for accessing and maintaining multiple mail files is provided. Subjects for mail files as well as individual messages are available. Unread messages can be retracted and recovery made of the last deleted message. Dreams can specify times as well as dates in relative or absolute form to control message appearance or expiration or to narrow selection criteria. Dreams is fully compatible with Batch, for keeping abreast of unattended operations and for implementing a repetitive reminder system based on day of the week or other longer intervals. Dreams provides message acknowledgment of receipt or expiration of messages.

In addition, the system manager may assign defaults for accounts, projects, and the entire system, including the assignment of certain privileges. Messages may be sent to names, nicknames, or groups and may be scanned, replied to, forwarded, or stored for later appearance. New, old, priority, or suppressed messages are available for each mail file. Messages are automatically routed.

A version of this product is available for the PDP-11 computer.

Price: \$1500 - \$5000

Contact: Thomas W. Burtnett, Director
(717) 245-1256

DCXX SOFTWARE SERVICES
Dickinson College Computer Center
Carlisle, PA 17013

DTC (Desk Top Calendar)

Operating System: VMS

Keywords: • Presentation aids • Printing • Scheduling

The program allows day-, week-, or month-at-a-glance displays; private and public calendar appointment files; meeting scheduling; multiple-appointment setup; evening appointments; and other functions. DTC runs on a VT100 but can be modified for other terminals. Build files are supplied for PDP-11 (RSX) and VAX. DTC may run under RT-11 if F77-type constructs are changed to FORTRAN IV. An RSX task image, not requiring a floating point, is supplied for users who lack the F77 compiler. VAX users are assumed to have access to native-mode FORTRAN; on VAX, DTC runs in native mode. DECUS number 11-597.

Note: Added multifile ability; purging of old appointments, meeting scheduling, bug fixer, free-time searching, and simpler appointment entry are provided.

A version of this product is available for the PDP-11 computer.

Price: \$5 - \$225

Contact: DECUS (see Introduction)

Electronic Timesheet™

Operating System: VMS

Keywords: • Billing • Cost accounting • Project management

This office automation package is used for project management, offering a solution to the process of filling in timesheets and producing related reports, such as client billing, project costing, labor reports, and so on. The easy-to-use package provides the following:

- Automated, systematic collection of information on employee time and expenses and external or interdepartmental expenses. Time and expense data can be entered either by the employees from their workstations or by a data entry operator.
- Flexible, effective project cost control.
- Up-to-date labor, project cost, and client billing reports on demand.
- Reduced risk of error at data entry, cost control, data security, and client billing stages.
- Reduced secretarial and administrative costs associated with project management.

A free trial offer is available.

Price: \$2000 - \$8500

Contact: I. Hauer

(416) 534-6878

FBN MANAGEMENT SCIENCE CORP.

871 Bathurst Street

Toronto, Ontario M5R 3G2

Canada

EXECmail

Operating System: VMS

Keywords: • Electronic mail • Text management
• Word processing

Distribution medium: magnetic tape unless otherwise arranged.

This high-performance electronic mail software package encourages correct communication skills and helps the user complete communication cycles. Communications in a series are linked, and earlier messages can be reviewed with a few simple keystrokes.

The easy-to-use menu-driven EXECmail system has single-key commands and offers detailed help prompting. Written in native MACRO assembly language, using systems programming techniques, EXECmail is fast and efficient. Only one disk block for each message is required, so the system will not be clogged.

Messages of any length, documents, and files are transferred at electronic speed. EXECmail can be used to relay text, graphics, binary programs, documents, and computer files.

Features include use of an in-basket, pending-basket, out-basket, and wastebasket. An alert of new mail is received when the user logs on to the system. Message status can be seen at a glance. Messages can be sent to individuals or groups.

DECnet-compatible EXECmail is available with the full-featured, sophisticated CT*OS Word Processor built in for creating and reading documents.

A version of this product is available for the PDP-11 computer.

Price: \$2690 - \$16,000

Contact: Sally Jensen, Marketing Director
(213) 461-6688

EXECUTIVE SOFTWARE, INC.
5537 Tuxedo Terrace
Los Angeles, CA 90068

FinalWord

Operating System: VENIX, VMS

Keywords: • Documentation • Text management
• Word processing

FinalWord is a full-screen editor and text formatting package that runs on the VENIX operating system. The package runs on the Professional 350, PDP-11, and VAX computer systems.

As an editor, FinalWord is easy to learn for beginners but has extensive features for advanced users. Menus are available when needed but are transparent to speedy users. The user can define function keys — for example, delete and save or find a file. Several files can be edited and displayed at once. Global search and query keys allow for rapid movement and editing within the text.

With FinalWord formatting, chapter headings, footnotes, subsections, appendixes, and indexes are numbered and positioned automatically. The layout and formatting commands can be embedded in the text or in separate files. FinalWord can justify text with true proportional spacing, print boldface and underline text, and use special fonts if available on the user's printer. The formatted text can be previewed on the screen and saved in a file to be printed immediately or at a later time.

FinalWord supports a wide variety of terminals and printers.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Business Software
(617) 661-1230
VENTURCOM INC.
215 First Street
Cambridge, MA 02142

FIRES (Flexible Information Reporting and Editing System)

Operating System: ULTRIX-32

Keywords: • Information management • Report writer
• Text management • Word processing

This system enables office personnel to easily produce reports and information. No technical training is required. Responses to simple English-language questions will lead anyone, step by step, through requests for the many reports and tabulations needed to satisfy management information requirements. In minutes, you can request reports from any automated file. Your data files need no reformatting.

FIRES offers record selection (10 fields); sequencing (five levels); automatic or specified page formatting and column titles; three lines of page headings and up to three lines of footnotes; totals, averages, percentages, and counts of occurrences; 2- or 3-dimensional tables; arithmetic computations between fields; saved report requests for repetitive-type reports; and early error detection of request prior to report creation.

Price: \$10,000 – \$20,000

Contact: Raymond G. Kennerly
(301) 441-1390
KENNERLY ASSOCIATES, INC.
6302 Merna Lane
Lanham, MD 20706

Handle Business Graphics

Operating System: ULTRIX-32

Keywords: • Graphics • Presentation aids • Printing

Handle Business Graphics is a fully interactive package for generating powerful business graphic drawings. Drawings can be moved from page to page as documents are enlarged or shortened. Multiple drawings are allowed in any text document.

Pie, line, and bar charts (stacked or grouped) can be generated from either raw data or a Handle Calc model. Handle Business Graphics also permits up to four plots within a drawing. Any graph can be displayed within a Handle Writer document and printed with the document on a letter-quality or dot matrix printer. Or, the space can be saved and the graph plotted on the document with a color plotter. In every case, the correct size of the plot is "remembered" by Handle Writer and correctly drawn in.

A version of this product is available for the PDP-11 computer.

Price: \$295

Contact: Karan Kauppila
(916) 583-7283
HANDLE CORP.
P.O. Box 7018
Tahoe City, CA 95730

Handle Calc

Operating System: ULTRIX-32

Keywords: • Financial planning • Mathematics • Spreadsheets
• Statistics

Handle Calc/Math produces electronic spreadsheets and provides a comprehensive interactive math package. Users can produce virtual spreadsheets, user-defined columns, sorting, an execute file, worksheet consolidation, and formatting.

Handle Calc can also generate pie and bar charts from any Handle Calc model by using Handle Graphics. Windowing and title locks are additional features.

Handle Calc/Math is fully interactive with Handle Writer, Handle Graphics, and Handle List. The package enables the user to insert and do mathematical calculations in a Handle Writer document and is completely function key driven.

A version of this product is available for the PDP-11 computer.

Price: \$395

Contact: Karan Kauppila
(916) 583-7283
HANDLE CORP.
P.O. Box 7018
Tahoe City, CA 95730

Handle Spell

Operating System: ULTRIX-32

Keywords: • Text management • Word processing

Handle Spell offers automatic spelling checking and correction and features an 80,000-word dictionary and user-defined spelling dictionary with Handle's unique phrase-recall option. Handle Spell-Proofreader allows the user to correct misspelled words with the correct word by using simple keystroke commands.

A version of this product is available for the PDP-11 computer.

Price: \$125

Contact: Karan Kauppila
(916) 583-7283

HANDLE CORP.
P.O. Box 7018
Tahoe City, CA 95730

Handle Writer

Operating System: ULTRIX-32

Keywords: • File management • Report writer
• Text management • Word processing

This comprehensive word processor and filing system supports mail merge, document indexing, cataloging, and archive cataloging. Complete password security controls limit access to the entire system or only to selected documents. Mail boxes, interoffice memos, and corporate reading files offer the user office automation features in a word processor that can be accessed by single-keystroke commands.

Handle Writer maintains complete catalogs and archive catalogs of all documents created. Documents can be indexed (filed) under multiple subject titles. An operator can also ask for selected documents to be displayed from the catalog or for all unsecured documents to be displayed.

Detailed user profiles are a step-by-step computer-prompted use or style sheet. Easy question-and-answer sessions prompt the user to configure the work being done at each terminal, define who is at that terminal, passwords, default printers, preferred formats, and menu selections.

In addition, import/export capabilities allow Handle Writer to read system files or UNIX* mail files and to create Handle documents. Handle Writer also can export any document to system files or to a UNIX* mail box.

When bundled with Handle Graphics, Handle Writer enables the user to include text business graphics, printed either on a dot matrix printer or on a color graphics plotter. Drawings of any size can be placed in a document and can be viewed in exact form, using Handle's proof mode.

A version of this product is available for the PDP-11 computer.

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Price: \$595

Contact: Karan Kauppila
(916) 583-7283
HANDLE CORP.
P.O. Box 7018
Tahoe City, CA 95730

IB Graph

Operating System: VMS

Keywords: • Decision support • Documentation • Graphics
• Report writer

This menu-driven system allows users to produce different types of pie, bar, and line graphs. For example, IB Graph can produce horizontal and vertical bar graphs, floating bars, and bars with depth. Users may explode any number of segments of a pie. Shaded line graphs are possible.

Data is easily captured. Data may be either entered by the operator or captured from existing data bases through the menu-based system. Thus, no new code needs to be written to convert data for plotting.

IB Graph supports a wide range of plotting devices: VT125s, VT240, VT241, TEK4105s, LA34s, LA100s, Printronix Line Printers (LXY/11 and LXY/21), and Hewlett-Packard Plotters with an HPGL or HPIB interface.

A version of this product is available for the PDP-11 computer.

Price: \$3000 - \$9500

Contact: Eric Moothart, Software Marketing Director
(714) 970-1515
DATA PROCESSING DESIGN, INC.
1400 North Brasher Street
Anaheim, CA 92807

IB Slide

Operating System: VMS

Keywords: • Decision support • Graphics • Presentation aids

This easy-to-use product enables office personnel to produce word charts, organizational charts, or flow diagrams. IB Slide helps create graphics for any presentation.

IB Slide's clear and concise menu system has been designed for all users, even those with little or no computer expertise. With IB Slide, today's office professionals can quickly create presentation-quality graphics, 35-mm slides, transparencies, and high-resolution plots. In addition, IB Slide can edit business charts produced by IB Graph. IB Slide allows the user to create charts that contain both free-form text

and shapes and to save and recall charts from disk. With IB Slide, users can create a library of commonly used shapes for easy assembly of complex charts.

Interfaces are available to outside applications — WORD-11 and IB Graph, for example. IB Slide supports a wide range of DIGITAL hardware, as well as high-resolution Hewlett-Packard pen plotters.

A version of this product is available for the PDP-11 computer.

Price: \$2500 — \$4500

Contact: Eric L. Moothart, Software Marketing Director
(714) 970-1515

DATA PROCESSING DESIGN, INC.
1400 North Brasher Street
Anaheim, CA 92807

ICT (International Cable Testing System)

Operating System: VMS

Keywords: • Banking • Security • Telecommunications

This turnkey software package completely automates the testing function while improving accuracy, control, security, and efficiency. The system can store all test key tables, fixed numbers, and incoming and outgoing consecutive numbers for all banks entered in the system. All transaction information is stored in the ICT System, thus eliminating the need for manual logs. To help eliminate errors and their penalty costs, the ICT System will alert the testing clerk of duplicated incoming consecutive numbers and incorrect tests. Additionally, a telex is prepared by the system for all missing incoming consecutive numbers.

Reports are produced daily, indicating all test transactions, incorrect and duplicate tests, and missing consecutive numbers. That feature aids in the management of the testing area, which traditionally has had few management controls. As the calculation of all tests is automatic and operator input is both minimal and checked for errors, the accuracy of this system will far surpass that of other methods. In addition, the time required to test daily messages is substantially reduced. Storage space in a testing department will be increased by removing actual test key files.

More than 1000 banks can be stored on the ICT System.

A version of this product is available for the PDP-11 computer.

Price: \$5000 — \$10,000

Contact: Salvatore Cangialosi, President
(212) 946-5796

PRIME ASSOCIATES, INC.
38 Paerdegat 7 Street
Brooklyn, NY 11236

INmail

Operating System: IS/3, IS/WB, VMS

Keywords: • Electronic mail • Networking

This electronic mail sending and receiving facility is a flexible routing system with reply and forwarding features and secondary mailboxes. The program interfaces with remote UNIX* systems using INnet and/or uucp.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Ted White

(213) 450-8363

INTERACTIVE SYSTEMS

1212 7th Street

Santa Monica, CA 90401

InterText™

Operating System: VMS

Keywords: • Data entry • Pre- and postprocessors
• Text management • Word processing

This complete word and text processing system can be used on either standard CRT terminals or terminals with advanced video options. InterText has been designed so that variable names can be embedded in the texts. The user can fill in those variables when the texts are printed. Special preprocessors and scans can be defined that will derive the values to be printed from any data base that coexists on the same disks with InterText.

Like any other word processing system, InterText may be considered a smart typewriter for writing, editing, and printing text. After being created and edited, a text file may be printed in a formatted version, which InterText accomplishes by interpreting formatting controls in the text and those that are defined by the user at the time of printing.

The user may print text by itself, in a stream with other text files, or by using InterText's special processor option. At each printing, the user is requested to indicate the text file(s) to be printed, what spacing (between lines) is required, the number of copies to be printed, and the margins to be used. If the special processor option is used, the user also specifies which processor is to be used, and the system will select the output on the basis of that processor, filling in variable data as it proceeds.

A version of this product is available for the PDP-11 computer.

Price: \$2500

Contact: Alexander J. Phillips, President
(201) 256-7633

INTERACTIVE SYSTEMS AND MANAGEMENT CORP.
1500 Cardinal Drive
Little Falls, NJ 07424

LABELS (The Mailing List System)

Operating System: VMS

Keywords: • Mailing lists

Distribution media: 9-track 1600 bpi magnetic tape, TU58 DECtape II cartridge.

LABELS is an interactive system for developing, maintaining, and printing a mailing list and/or mailing labels. A master file record contains fields for company name, first name, last name, two address lines, city, state, a 5- or 9-digit zip code, and phone number. A 2-character field for a geographic region code, five 2-character fields for category codes, and five 2-character fields for specialty codes are optional.

In creating a mailing list, the user has the option of choosing up to nine categories and up to nine specialty codes, plus a specific geographic region or all regions. The system then gives a record count listed by the first three digits of the zip code and gives the user the option of deleting certain zip codes from the listing. The system gives the user the option of creating multiple listings for each addressee and produces a user-named output file. The system also contains a menu option for determining the record count for each zip code of the master file.

The system supports check-digit numbering systems. Output is on 3 1/2" x 1" labels, one or three across.

A version of this product is available for the PDP-11 computer.

Price: \$1500 - \$2250

Contact: Nathan I. Lieberman
(812) 479-6951

EVANSVILLE DATA PROCESSING CORP.
1010 S. Weinbach Avenue, P.O. Box 2469
Evansville, IN 47714

Latitude™

Operating System: UNIX* (Berkeley, System III, System V)

Keywords: • Spreadsheets • Word processing

This business and office automation software provides word processing and spreadsheet functions. Latitude features simple, English-like commands that allow the user to write and edit text and arithmetic in the same document. The Tabulator™ command panel allows the user to create a spreadsheet in a document. Full spreadsheet abilities provide for analytical financial statements as large as four 8 1/2" x 11" pages.

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Word processing features include the ability to insert boiler plate words, phrases, and formulas; a 45,000-word spelling checker; on-line help; and formatting facilities.

User documentation, training materials, installation instructions, and reference materials are supplied.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$2395 - \$4995

Contact: Alison Baker
(415) 543-1199

HORIZON SOFTWARE SYSTEMS, INC.

#4 China Basin Building
185 Berry Street, Suite 4821
San Francisco, CA 94107

LEX-11

Operating System: VMS

Keywords: • Word processing

Memory required: 32KW. Distribution media: diskette, magnetic tape.

LEX-11 is an integrated word and list processing package with additional office automation functions. Menu-driven LEX has an extensive mass-mailing program, standard paragraphs, gold and blue key functioning, and complete full-screen what-you-see-is-what-you-get editing. LEX has a 4-function calculator, an optional 90,000-word spelling checker, and an on-line training package.

LEX-11 is written in language D and can be customized by the user.

A version of this product is available for the PDP-11 computer.

Price: \$550 - \$7500

Contact: Karen McCann
(617) 443-5106
EEC SYSTEMS INC.
327/E Boston Post Road
Sudbury, MA 01776

Lyrix™ Word Processing System

Operating System: ULTRIX-32, UNIX* (Berkeley, System III, System V)

Keywords: • Forms management • Printing
• Text management • Word processing

This word processing system is designed specifically for use under XENIX or UNIX* operating systems. Lyrix has a fully user-configurable interface; commands, menus, and messages are easily adapted to individual users and can be translated into foreign languages, including special characters and accents. Lyrix combines text

editing, formatting capabilities, and print-time commands into a single environment. The Lyrinx menu provides access to integral UNIX*/XENIX functions, such as mail or file-management utilities, without the need for added software packages. With Lyrinx, the terminal screen acts as "electronic paper," displaying what will be printed. Visible rulers control margins, tabs, and line justification.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$750 - \$3995

Contact: Telemarketing Department
(408) 425-7222

THE SANTA CRUZ OPERATION, INC.
500 Chestnut Street, P.O. Box 1900
Santa Cruz, CA 95061

Mail System

Operating System: ULTRIX-32, UNIX* (Berkeley)

Keywords: • Mailing lists

This easy-to-use name and address system can code addresses to do selective mailings. Extensive search and retrieval capabilities exist on any field, and labels can be produced for mailings, in addition to a wide range of reports.

The system is written in C language and uses the public domain Ingres data base written by the University of California at Berkeley. Binary and source codes are available for UNIX* Berkeley 4.1 and 4.2. The source code is available for all others.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: \$1000

Contact: Fred Potthoff
(612) 941-9470

FARGO ELECTRONIC SERVICES, INC.
7150 Shady Oak Road
Eden Prairie, MN 55344

MATRIX Transaction Exchange

Operating System: VMS

Keywords: • Electronic mail • Networking
• Telecommunications

This enhanced, friendly, menu-based computer conferencing system features advanced electronic communications, such as sophisticated text conferencing with unlimited conferences, discussions, and personal memo areas. MATRIX also provides on-line help and instruction, a bulletin board, a directory, and electronic mail. MATRIX can be purchased or timeshared.

MATRIX offers more than 200 user functions and more than 60 management functions for the system operator, conference manager, and discussion leader. Management reports and accounting functions are available to all levels, including the MATRIX user.

The following is a partial list of computer conferencing system features:

- On-line meeting and management conferencing features simultaneous access to text (data) files by different persons in different locations and group-to-group communications with special areas for electronic meetings and discussions.
- Personal notepad and work areas feature password-protected files or memo areas that are kept on line for ease of use. Notes or memos can be sent to other conferees, to conference discussions, or to the bulletin board.
- On-line bulletin board features systemwide access by participants for company notices, policy procedures, and other activities.
- Status and tracking functions include information about current mail, comments, and new items added to the system.
- Management reports and directories provide reports about mail and conference activity, such as a directory of conferences and members located throughout the system.
- Electronic mail/messaging features one-to-one messaging, including new-message announcements, filing, renaming, editing, and forwarding.

A version of this product is available for the PDP-11 computer.

Price: \$10,000

Contact: Robyn Rehbein, Product Manager
(303) 444-8877
ITC CORP.
1877 Broadway
Boulder, CO 80302

Message System

Operating System: VMS

Keywords: • Electronic mail • Scheduling

This versatile automated office support package provides electronic mail, appointment scheduling, and special receptionist functions. The menu-driven system comes with user manuals and your company name prominently displayed on all inputs and outputs. The Appointment Scheduling function highlights appointment conflicts and accommodates appointment scheduling for user-defined groups of system users. The Office Support System includes special receptionist processing that simplifies the servicing of phone calls, message taking, and employee tracking.

Price: \$3000

Contact: Robert A. Ravid
(301) 231-5170

ONGOING BUSINESS SYSTEMS, INC.
1776 East Jefferson Street, Suite 318 South
Rockville, MD 20852

MUSE Word Processing Software

Operating System: ULTRIX-32, VMS

Keywords: • Text management • Word processing

MUSE, also known as WordMARC, provides office-grade word processing on DECSYSTEM-10, DECSYSTEM-20, VAX, PRO 350, and Rainbow computers. Documents created on one computer can easily be sent over DECnet to another computer for further editing or printing.

The MUSE software package features all the functions commonly found in the most prominent word processing systems on the market. MUSE features a spelling checker that provides capabilities unmatched by any other word processing package. Documents are checked against four dictionaries: the most-common-word dictionary (300 words), a user directory dictionary, a site-specific dictionary, and the MARC main dictionary (57,000 words). After the spelling check, MUSE interactively presents the document with the errors identified for correction. The user directory dictionary can be automatically updated during that session.

Other features in MUSE include interactive pagination, an abbreviation glossary, quick-skip cursor, boldface typing, column move, copy and erase, multiple-line headers and footers, and cursor-controlled document selection and deletion. All those features are directed at increasing productivity by improving ease of use.

Organizations engaged in heavy technical typing with the need for multilevel equations find MUSE very user friendly. Each character line can be expanded to 13 levels on the screen, allowing the user to see up to 6 levels of superscript and 6 levels of subscript in addition to the base line. MUSE handles alternate character sets on the terminal screen, so Greek/math characters can easily be combined with standard characters to create complex equations.

Price: \$595 - \$12,500

Contact: Bob Brock
(415) 326-1971

MARC SOFTWARE INTERNATIONAL, INC.
260 Sheridan Avenue, Suite 200
Palo Alto, CA 94306

Office Supply/1000

Operating System: VMS

Keywords: • Accounting • Inventory • Order entry • Payroll

Office Supply/1000 provides order processing, inventory control, sales analysis, accounts receivable, accounts payable, general ledger, payroll, word and list processing, and key customer system.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Andrew Yasenchak

(201) 231-9400

UNITRONIX DATA SYSTEMS, INC.

50 County Line Road

Somerville, NJ 08876

Officeman

Operating System: VMS

Keywords: • Electronic mail • Forms management
• Text management

Distribution medium: 9-track 800/1600 bpi magnetic tape.

This integrated electronic office system includes word processing, electronic mail, forms and memoranda generation, personal and corporate filing and retrieval, calendars, check lists, appointments and resource scheduling, and other key management, professional, and secretarial applications. The system can interface with existing/planned data processing applications and with external systems such as Telex, word processors, personal computers, and so on. The system has been used in the areas of oil exploration and production, manufacturing and distribution, financial services, central government, and education.

A version of this product is available for the PDP-11 computer.

Price: \$10,000 - \$35,000

Contact: Dr. C. V. D. Forrington

0242 42115

CORPORATE BUSINESS SYSTEMS LTD.

Jessop House, 30 Cambray Place

Cheltenham, Glos GL50 1JP

United Kingdom

OfficePolicy

Operating System: ULTRIX-32

Keywords: • Data base management • Information management
• Text management

This methodology for documenting, communicating, and accessing policies and procedures in large organizations is a complete approach, combining management guides, training courses, and software tools based on The Officesmith.™ The system features automatic indexing/cross-referencing, search and retrieval facilities, and consistency in standards and writing format.

Price: \$20,000 +

Contact: Paul J. Hébert
(613) 235-6749

OFFICESMITHS INC.
331 Cooper Street
Ottawa, Ontario K2P 0G5
Canada

The Officesmith™

Operating System: ULTRIX-32

Keywords: • Application development
• Information management • Text management

This fourth-generation product features document-based management and application development facilities in a multiwindow operating environment. Text and forms are integrated through a hierarchical model with relational access paths. One environment is available for the entire application development life cycle, with application development tools for end users and developers and rapid development through prototyping and mainframe information resource management techniques. The multiwindow operating environment provides an open systems architecture for integration of other software at the window, dialog, and file levels and a customizable universal user interface that operates on standard terminal equipment.

Price: \$5000

Contact: Glenn A. McInnes, President
(613) 235-6749

OFFICESMITHS INC.
331 Cooper Street, Suite 200
Ottawa, Ontario K2P 0G5
Canada

Officeware®

Operating System: ULTRIX-32, UNIX* (Berkeley)

Keywords: • Forms management • Graphics • Spreadsheets
• Word processing

Implemented around highly intelligent workstations, Officeware provides the writing, planning, forms management, graphics display, personal, and networking requirements of executives, knowledge workers, and production personnel. The workstation may be linked to a UNIX*-based host processor and other Officeware workstations in a local area network.

Because all Officeware components are integrated, the approach is consistent and comprehensive. Self-explanatory function keys maintain the same meaning from function to function, and the ease of switching from one facility to another further enhances the product's operational strengths.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$1200

Contact: Tony Parkhill

(415) 680-7800

CENTURY ANALYSIS, INC.

114 Center Avenue

Pacheco, CA 94553

PARS (Professional Accounts Receivable System)

Operating System: VMS

Keywords: • Accounts receivable • Billing • Cost accounting

Distribution media: 9-track 1600 bpi magnetic tape, TU58 DECtape II cartridge.

This interactive time analysis and billing system is particularly useful in professional organizations, such as CPA firms, law firms, and so on, in which client billing is directly related to the time an individual spends performing a certain service. The system accumulates employees' hours under a certain work code, at a certain standard rate, and for a specific client/job. Thus, the system is adaptable to a variety of purposes.

ABLEPARS supports the automatic billing of up to 999 standard, recurring charges as well as invoice charges. The year-to-date billable charges and year-to-date billings reports can be compared to support decisions involving retainer fees and billing in general. ABLEPARS gives the professional the option of billing as the services are rendered or spreading the billing over several billing periods. ABLEPARS can be implemented by itself or integrated with other systems. The system has many user-controlled options and does not require a programmer for modification in a time-sharing environment. Screen-formatted entry encourages user acceptance, decreases operator training time, and ensures data integrity.

A version of this product is available for the PDP-11 computer.

Price: \$3500 - \$5000

Contact: Nathan I. Lieberman

(812) 479-6951

EVANSVILLE DATA PROCESSING CORP.

1010 S. Weinbach Avenue, P.O. Box 2469

Evansville, IN 47714

Participate

Operating System: MicroVMS, VMS

Keywords: • Electronic mail • Networking
• Telecommunications

Memory required: 600 blocks.

This text-based computer conferencing system integrates electronic mail with electronic meeting and networking. Groups can communicate on line. Participate automatically updates all those interested, files messages, and maintains distribution lists. This system is designed to make group efforts more productive by easing communication overhead and by allowing linkages.

Price: \$10,000 – \$45,000

Contact: M. Katherine Cox
(617) 729-1976

PARTICIPATION SYSTEMS INC.
50 Cross Street
Winchester, MA 02122

Participate II

Operating System: MicroVMS, VMS

Keywords: • Communications • Electronic mail
• Project management • Sales and marketing

Memory required: 600 blocks.

This package enhances department-level group communication and teamwork. The system allows you to send electronic mail, hold "electronic meetings," or manage your group electronically. Typical applications include project coordination, technical training, and sales management. The system can also be used as an internal publishing and bulletin board system.

Participate II can be tailored so that topics can be set up as conferences in advance and access rights can be established before users sign on.

Price: \$6000 – \$20,000

Contact: M. Katherine Cox
(617) 729-1976

PARTICIPATION SYSTEMS INC.
50 Cross Street
Winchester, MA 01890

PER-FORM™ (Personalized Form Letters)

Operating System: VMS

Keywords: • Forms management • Mailing lists
• Text management

Distribution media: 9-track 1600 bpi magnetic tape, TU58 DECtape II cartridge.

This on-line package interfaces a mailing list with a letter developed with the RSTS/E utility RUNOFF and creates a personalized letter. PER-FORM allows up to nine personalized fill-ins in the body of the letter and prints the personalized envelope.

PER-FORM does not claim to be a word processing system, since many individuals and firms find word processing impractical because of the size and frequency of their mailings. PER-FORM is an affordable, practical software complement for any company or firm with a RSTS/E-based system.

A version of this product is available for the PDP-11 computer.

Price: \$800

Contact: Nathan I. Lieberman
(812) 479-6951

EVANSVILLE DATA PROCESSING CORP.
1010 S. Weinbach Avenue, P.O. Box 2469
Evansville, IN 47714

PS (Personal Secretary)

Operating System: ULTRIX-32, ULTRIX-32m, VMS

Keywords: • Mailing lists • Text management
• Word processing

Standard features of PS, a portable general-purpose multiple-window editor and word processing system, include:

- **Device independence:** PS operates with any display terminal supporting direct cursor addressing.
- **Application/user independence:** Control keys, escape sequences, and special function key maps are entirely user definable. Those definitions may be forced at startup or entered during the edit session.
- **Flexible command structure:** PS supports a simple and powerful command structure that can be tailored to the user's needs. Complex commands may be built by combining simple commands; one or more keystrokes may be defined to execute those commands. Text formatting and cut and paste functions operate on columns of text, as well as linear ranges.
- **Multiple windows:** Several files may be edited concurrently. The display may be split horizontally, vertically, or both at any point to form multiple editing windows.
- **Help facility:** PS has a general help facility that includes a tutorial, a summary for each command, and general information. The help facility may be used simultaneously while editing. Help files are normal text files and may be extended by the user.
- **Spatial correctness:** The editor presents spatially correct text. No special characters surround underline or similar overstrike sequences, yet all characters are visible and editable; control characters are easily distinguished from normal graphics characters.

A version of this product is available for the PDP-11 computer.

Price: \$100 – \$1000

Contact: Gary Aitken
(303) 487-3342

FINISHED SOFTWARE
P.O. Box 72
Collbran, CO 81624

Q-CALL

Operating System: ULTRIX-32, UNIX* (Berkeley, System III, System V), VMS

Keywords: • Data base management • Telecommunications

Q-CALL can be used to create a data base of names, addresses, and phone numbers by alphabetical listing or category. Q-CALL also allows the user to store port configurations for various computer systems and to perform complete autodial functions, using English-language menus.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$115 – \$695

Contact: Vanessa Abbe
(818) 789-8588

QUADRATRON SYSTEMS, INC.
15760 Ventura Boulevard, Suite 1032
Encino, CA 91436

Q-DATE

Operating System: ULTRIX-32, UNIX* (Berkeley, System III, System V), VMS

Keywords: • Scheduling

Q-DATE is an electronic calendar/scheduler consisting of a monthly, a weekly, and a daily display. Q-ONE word processor-compatible function keys allow the user to easily insert, move, replace, copy, delete, and search for appointments. Calendars may be set up with private appointment passwords, and any appointment can issue an alarm.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$155 – \$995

Contact: Vanessa Abbe
(818) 789-8588

QUADRATRON SYSTEMS, INC.
15760 Ventura Boulevard, Suite 1032
Encino, CA 91436

Q-FORM

Operating System: ULTRIX-32, UNIX* (Berkeley, System III, System V), VMS

Keywords: • Data collection • Forms management • Printing

Q-FORM is an interactive screen builder and forms manager that can be used for straight forms design or as a data collection vehicle for other programs, such as data bases or spreadsheets. Fields within a form may be defined as alphabetical, numeric, or both, and limits may be placed on the number of characters. Q-FORM also has complete print capability.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$395 - \$2000

Contact: Vanessa Abbe
(818) 789-8588

QUADRATRON SYSTEMS, INC.
15760 Ventura Boulevard, Suite 1032
Encino, CA 91436

Q-MAIL

Operating System: ULTRIX-32, UNIX* (Berkeley, System III, System V), VMS

Keywords: • Electronic mail • File transfer

Q-MAIL, an electronic mail program, can be used for sending notes and documents to users on the same system or across systems automatically. Q-MAIL uses the Q-ONE word processor to create messages but easily interfaces with other types of editors as well. Features include an undelete "waste-basket" function, in/out baskets, and certified mail.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$155 - \$995

Contact: Vanessa Abbe
(818) 789-8588

QUADRATRON SYSTEMS, INC.
15760 Ventura Boulevard, Suite 1032
Encino, CA 91436

Q-MATH

Operating System: ULTRIX-32, UNIX* (Berkeley, System III, System V), VMS

Keywords: • Calculation aids • Mathematics

Q-MATH works like a standard, full-function office calculator, complete with 24 memory storage locations and "tape." Numbers and alpha characters entered on the on-screen "tape" can be saved to an easily retrievable file. Function key definitions can be displayed on the screen at any time.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$115 - \$695

Contact: Vanessa Abbe
(818) 789-8588

QUADRATRON SYSTEMS, INC.
15760 Ventura Boulevard, Suite 1032
Encino, CA 91436

Q-MENU

Operating System: ULTRIX-32, UNIX* (Berkeley, System III, System V), VMS

Keywords: • Menu handlers

Q-MENU is a multilevel menu utility program used for generating and maintaining menus. Menus can execute any resident programs on a system, regardless of the source language. Operating system commands can also be executed through Q-MENU menus, creating an English-language environment for all users of the system.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$395 - \$2000

Contact: Vanessa Abbe
(818) 789-8588

QUADRATRON SYSTEMS, INC.
15760 Ventura Boulevard, Suite 1032
Encino, CA 91436

Q-NOTE

Operating System: ULTRIX-32, UNIX* (Berkeley, System III, System V), VMS

Keywords: • Data base management • Data collection
• Text management

Q-NOTE is a writing program designed for collecting, indexing, and retrieving any type of information, using an index card editor format. Primary and secondary key fields may be defined for each on-screen index card and used to sort and retrieve information on the body of the card from the data base.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

1372 Office Systems

Price: \$115 - \$695

Contact: Vanessa Abbe
(818) 789-8588

QUADRATRON SYSTEMS, INC.
15760 Ventura Boulevard, Suite 1032
Encino, CA 91436

Q-OFFICE

Operating System: ULTRIX-32, UNIX* (Berkeley, System III, System V), VMS

Keywords: • Electronic mail • Forms management
• Word processing

Q-OFFICE, an integrated office automation package designed for ease of use and hardware independence, consists of eight software modules: Q-ONE, word processing; Q-MENU, menu manager; Q-DATE, calendar; Q-MAIL, electronic mail; Q-CALL, phone directory; Q-FORM, forms designer; Q-MATH, full-function calculator; and Q-NOTE, notepad/index program.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$1860 - \$9200

Contact: Vanessa Abbe
(818) 789-8588

QUADRATRON SYSTEMS, INC.
15760 Ventura Boulevard, Suite 1032
Encino, CA 91436

Q-ONE

Operating System: ULTRIX-32, UNIX* (Berkeley, System III, System V), VMS

Keywords: • File management • Printing • Text management
• Word processing

Q-ONE, a function key-oriented, menu-driven word processor, can be used to edit source code as well as to produce advanced, photocomposed documents, using virtually any terminal or printer. Records processing, complete with English-language menus for generating control files, is also included with the package.

Q-ONE allows for complete integration with other software through easy-to-use function keys and predefined glossary files. Sophisticated integration with spreadsheets and data bases can be accomplished by a few simple keystrokes. Q-ONE also lets users manipulate and maintain files as well as move around in the operating system environment without leaving a system of user-friendly menus.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$595 – \$3000

Contact: Vanessa Abbe
(818) 789-8588

QUADRATRON SYSTEMS, INC.
15760 Ventura Boulevard, Suite 1032
Encino, CA 91436

REPGEN (Report Generator)

Operating System: VMS

Keywords: • Programming tools • Report writer

REPGEN is a powerful tool that allows non-data processing individuals to use computer resources. Programs that take days for a skilled programmer can be generated in minutes by a novice REPGEN user. REPGEN creates reports from existing computer files, creates and maintains computer files in on-line or batch mode, and allows inquiry from file to file.

Features of REPGEN include file support, multiple file inquiries, inquiries by any field, a help feature, file updates, sorting, flexible line formatting, data inclusion/exclusion, data security, and production reports.

A version of this product is available for the PDP-11 computer.

Price: \$2000 – \$20,000

Contact: Tom Muskiluke
(519) 893-4200

DIGITAL BUSINESS COMPUTERS
133 Manitou Drive
Kitchener, Ontario N2C 1L4
Canada

RNI (WRDPRO—Word Processing/Text Editing)

Operating System: VMS

Keywords: • Documentation • Text management

The RNI utility adds the flexibility of IMPRS file handling to word processing. Text, format and control of pagination, titling, margin justification, and so on, are determined with simple commands. The user can prepare text using any/all data built with IMPRS.

A version of this product is available for the PDP-11 computer.

Price: \$1500

Contact: Elvin E. Smith or Forrest E. Weddle
(913) 782-8544

RUF CORP.
1533 E. Spruce
Olathe, KS 66061

Smart Mailer

Operating System: VMS

Keywords: • Mailing lists • Sales and marketing

Distribution media: RX01, TU58 DECtape II cartridge.

This product creates and maintains mailing lists and generates address labels. Mailing lists contain packed addresses with up to 327 characters, each composed of a name, three address lines, two identifiers, a counter, a comment, and up to six user-defined categories. Each mailing list can be set up differently. For example, a list can have different types of address identifiers and have different validations performed on address information.

Each mailing list can have associated sublists. The sublist definitions are named and stored with the mailing list. The sublist addresses are extracted each time they are referenced, to conserve space and to ensure that the addresses are up to date.

Mailing lists can be created and maintained by adding, removing, and changing individual address entries. Addresses, category definitions, or sublist definitions can be displayed on a video screen. Full addresses, category definitions, and sublist definitions can be printed or written to a disk file. Any mailing list or sublist can be printed on a variety of labels. A standard list document file can be generated with DIGITAL word processing systems to produce personalized letters.

Refer to SPD #26.19.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$540 - \$900

Contact: Consult your local DIGITAL sales office (see Introduction).

SofGram Electronic Communications

Operating System: ULTRIX-32, UNIX* (Berkeley)

Keywords: • Electronic mail • Mailing lists • Menu handlers
• Telecommunications

SofGram, a total, menu-driven electronic mail package, allows a user to create, send, and receive messages over the Telex, TWX, and DDD networks. The system organizes and files your messages, gives you access to on-line data bases, and informs you when you receive messages. SofGram maintains a data base of everyone to whom you send messages. That data base can be easily organized for mass mailings.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$500 – \$2500

Contact: David Schneider
(201) 447-3901

SOFTEST

555 Goffle Road
Ridgewood, NJ 07450

Star-Plus™

Operating System: VMS

Keywords: • Personal computing • Text management
• Word processing

This low-cost multiuser system uses the features of an ANSI 3.64 terminal to provide an efficient, user-friendly word processing system. The system helps improve office efficiency in the preparation of documents and improves the efficiency of software development and maintenance. Star-Plus uses a WordStar™-like command structure that is easy for new users to learn.

Star-Plus is written in a high-level language and uses the virtual-memory capability of the minicomputer to minimize system resources and to provide fast response. The system includes a complete user's guide and simple installation instructions.

WordStar™ is a trademark of MicroPro International Corporation.

Price: \$695 – \$1995

Contact: Gail A. Castle
(408) 370-1943

KERNEL SOFTWARE SYSTEMS

14125 Capri Drive, Suite 7
Los Gatos, CA 95030

TASMIN

Operating System: VMS

Keywords: • Data dictionary • Word processing

TASMIN, a word processor that is available for VT52 or VT100-compatible terminals, supports a variety of printers. TASMIN has a comprehensive set of edit instructions, such as word wrap, screen scroll, positioning and replacement commands, justification character/word/line/paragraph modification, and merging with ASCII documents. TASMIN output can be in a letter-quality format, a draft copy, or a standard ASCII file. Edited documents can be spelling-checked against a data dictionary containing up to 200,000 words.

A version of this product is available for the PDP-11 computer.

1376 Office Systems

Price: £800 – £1800

Contact: K. E. Archer

0296 32023

S-COM COMPUTER SYSTEMS ENGINEERS LTD.

Tower House, High Street

Aylesbury, Bucks

United Kingdom

Timetrieve™

Operating System: VMS

Keywords: • Management • Query facilities • Report writer
• Scheduling

This versatile calendar management application schedules and reschedules appointments. The system checks your normal appointment schedule and warns you if appointments conflict.

Timetrieve, a powerful, intelligent information manager, allows you to retrieve and display data searching by professional, client, location, date, or primary field that you select. Appointments are easily rescheduled without reentering the data and notes. You can add command synonyms specific to your industry or geographic area with Timetrieve's unique LEARN command.

Price: \$2000 – \$4000

Contact: Robert Thomason

(603) 645-6677

INTERNATIONAL DIGITAL SYSTEMS CORP.

669 East Industrial Park Drive

Manchester, NH 03103

TOPAZ EZ-Mail

Operating System: VMS

Keywords: • Electronic mail

Memory required: 1MB. Distribution medium: magnetic tape.

This system allows a system user at a terminal to correspond electronically with one or more system users. A user can be notified of new mail and can read, write, print, throw away, and list mail. EZ-Mail may be addressed to a single user or to predetermined groups of users. An EZ-Mail letter can be of unlimited size. All EZ-Mail letters are encrypted for privacy. Available at additional costs are customizing and telephone support. A user's manual is included in the price. Programs are written in BASIC.

Purchase of one or more of the following TOPAZ packages is required: Accounts Receivable, Accounts Payable, General Ledger, Payroll, General Accounting System A/R, A/P, G/L. The price includes ALSP (Applications-Level Security Package).

Price: \$2000

Contact: Sales Department
(201) 884-0892

INTEGRATED SYSTEMS, INC.
170 Algonquin Parkway, P.O. Box D
Whippany, NJ 07981

UniplexII

Operating System: MicroVMS, ULTRIX-32, VMS

Keywords: • Data base management • Electronic mail
• Spreadsheets • Word processing

Memory required: 1MB. Distribution medium: 9-track magnetic tape.

This integrated office automation package, written in C and developed by Redwood International, includes word processing, spreadsheet and relational data base applications, menus, a screen builder, and a print spooler. UniplexII allows the user to easily access and move information and provides easy use through softkeys, which display available options to the user in all the components. UniplexII uses the UNIX* termcap and a built-in Tcap extension file to fully define any terminal. The package can be customized.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: \$1595 - \$9995

Contact: Joyce Bielen
(201) 985-8000

UNIPRESS SOFTWARE, INC.
2025 Lincoln Highway
Edison, NJ 08817

User-Mail

Operating System: VMS

Keywords: • Electronic mail

Memory required: 128K bytes minimum.

This comprehensive easy-to-use electronic mail system facilitates the exchange of text communications and offers advanced features. Any user may create, edit, locate, forward, print, send, or receive messages. Messages may be created by using the User-Mail messages editor or may be taken from preexisting files. Messages may be sent to individuals, predefined groups, or a list of CCs. Messages may be designated with a specific receipt date. Subprocedures provide for listing valid addressees, message queueing, checking for unread messages, and "unsending" messages. Message encryption is a standard feature that may be used optionally or set on permanently on an individual user basis. A system manager facility provides overall control.

User-Mail is written in BASIC-PLUS-2 and MACRO.

A version of this product is available for the PDP-11 computer.

1378 Office Systems

Price: \$2880

Contact: Jered Cady, Vice President, Sales and Marketing
(619) 745-6006

USERWARE INTERNATIONAL
2235 Meyers Avenue
Escondido, CA 92025

VALU

Operating System: MicroVMS, VMS

Keywords: • Communications • Information management
• Programming tools • VAX Information Architecture

Distribution media: RA60, RC25, RL02, RX50, TK50.

VAX VALU, an optional component of VAX VTX Version 2, consists of a set of programming tools that extend the distributed capabilities of the VAX VTX architecture to include nonvideotex applications such as order entry and electronic mail. VAX VALU can also be used to modify the VAX VTX user interface and to provide the necessary links to access VAX VTX from a variety of terminal types.

VAX VALU's three functional components are the External Link Kit (ELK), the Intelligent Data Mapper (IDM), and the Terminal Specific Interface (TSI):

- The External Link Kit provides systems-level programmers with the utilities to connect VAX VTX to other applications, such as transaction processing, that may run on either DIGITAL or non-DIGITAL systems. ELK supports only asynchronous programs and requires the programmer to provide for session management.
- The Intelligent Data Mapper provides an easy-to-use set of tools for the applications programmer. The IDM can link VAX VTX to new or existing applications on DIGITAL systems only.
- The Terminal Specific Interface (TSI) allows customers to modify the VTX Terminal Control Program to support a wide range of terminals. That capability protects a customer's computer investments by making VTX available from any terminal or personal computer.

Refer to SPD #26.94.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$6000 - \$15,000

Contact: Consult your local DIGITAL sales office (see Introduction).

VC

Operating System: ULTRIX-32, UNIX* (Berkeley, System III, System V)

Keywords: • Cost accounting • Decision support
• Financial analysis • Spreadsheets

Distribution media: magnetic tape, phone lines (uucp).

The VC spreadsheet package provides a worksheet of 1000 rows by 32,000 columns. Calculations may use the normal math operators plus a set of extended functions. All calculations are ordered, ensuring correct recalculation when any data value is changed. Data values can be fetched from external processes. Spreadsheets may be saved in either text or binary form, and multiple sheets may be merged. The package uses TERMCAP for complete terminal independence.

Extensive on-line help, an interactive tutorial to introduce the new user to VC, and a quick-reference guide are also included.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$149

Contact: William J. Ezell
(603) 883-9300

SOFTWARE INNOVATIONS, INC.
440 Amherst Street
Nashua, NH 03063

VF

Operating System: ULTRIX-32, UNIX* (Berkeley, System III, System V)

Keywords: • Data entry • Forms management
• Query facilities

Distribution media: phone lines (uucp), magtape.

This forms-oriented screen management package is used under the UNIX* operating system. The package allows entry, retrieval, and modification of data organized in standard UNIX* record format. VF provides access to UNIX* for forms so that external programs may be used to validate or provide data. VF uses the TERMCAP package from the University of California at Berkeley, which permits more than 150 kinds of CRT terminals to be supported.

Data files are simple UNIX* files that can be processed by standard UNIX* commands. Form definition files, which can also be processed by VF, define record presentation on a display screen and validation criteria for data fields.

VF offers both an informative user interface for novices or casual users and a concise interface for experienced users.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$249

Contact: David R. Dick
(603) 883-9300
SOFTWARE INNOVATIONS, INC.
440 Amherst Street
Nashua, NH 03063

VOX™ (VAX Office Exchange)

Operating System: VMS

Keywords: • Data base management • Text management
• Word processing

This easy-to-use, menu-driven office automation system contains a word processing conversion utility and electronic mail and integrates independent data base, word processing, graphics, and spreadsheet software products. VOX extends the capabilities of those products by supporting the transfer of information from one product to another.

VOX provides access to the individual packages and transfers information, from the menu level, between the packages. For example, the user can transfer spreadsheet information to word processing documents without having to retype any of the spreadsheet information.

Basic VOX includes a full-featured calculator, time manager, project manager, file manager, file printer, and electronic phone book. In addition, electronic mail allows the user to exchange entire documents and files with other users. VOX consists of six modules, each of which may be purchased separately.

Price: \$3000 - \$18,000

Contact: Larry Wood or Bill Reidy
(401) 847-7260
AQUIDNECK DATA CORP.
P.O. Box 639
Newport, RI 02840

VTX

Operating System: MicroVMS, VMS

Keywords: • Communications • Information management
• Programming tools • VAX Information Architecture

Distribution media: 9-track 1600 bpi magnetic tape, RA60, RC25, RK07, RL02, RX50, TK50.

VAX VTX, designed for VAX/VMS and MicroVAX/MicroVMS operating systems, is an information retrieval service that uses a tree-structured information base through which the user navigates by selecting choices from a menu. The content of the VTX information base consists of full-screen "pages" of information.

The information in the VTX information base is prepared by using standard DIGITAL editors, such as WPS and EDT. VAX VTX is used to arrange those pages in a hierarchical structure and to deliver them to the end user, based on the user's menu selections.

VAX VTX provides a distributed videotex service environment on VAX/VMS or MicroVAX/MicroVMS systems and networks, service-level functions compliant with CCITT F.300 recommendations, access through terminals to page and menu-oriented distributed text or graphics information bases, and an application-level protocol that permits communication between VTX and transaction-oriented "remote" applications with the use of VAX VALU, an optional component of VAX VTX.

VAX VTX provides the nontechnical person with both quick access to the system and the ability to peruse on-line information without training. VAX VTX features include extensive on-line help, available on request. The VTX Information Provider creates and maintains the information base structure through the use of a menu-driven utility.

VTX supports not only the VTX information base resident on a local VAX but also those VTX information bases resident on other VAX processors in a VAXcluster or over a DECnet link.

Refer to SPD #26.57.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$2500 – \$37,500

Contact: Consult your local DIGITAL sales office (see Introduction).

Who's Got the File?

Operating System: VMS

Keywords: • Bar coding

This system, developed by Universal Library Systems and written in BASIC-PLUS, uses bar-coded labels and bar-code wands and scanners to control movement of items. Therefore, at any moment, by accessing the file on line by description or by location, you can determine the location of any item or document.

This system has widespread application; users include large document or record centers, insurance companies, governments, manufacturers, airlines, and hospitals, for patient tracking, X-ray, and patient file control.

A version of this product is available for the PDP-11 computer.

Price: \$15,000 – \$40,000

Contact: Mel J. Endelman

(604) 926-7222

BAR CODE APPLICATIONS INC.

1609 Broadway, Suite A

Bellingham, WA 98225

WORD-to-WORD™

Operating System: VMS

Keywords: • Data conversion • Text management
• Word processing

This word processing utility program converts documents from one word processing format to another and retains the internal characteristics, such as rulers, underlining, bolding, headers, and footers. The CT*OS and WPS-8 word processing formats are supported.

Price: \$3000

Contact: Larry Wood or Bill Reidy
(401) 847-7260

AQUIDNECK DATA CORP.
P.O. Box 639
Newport, RI 02840

XED Word Processing System

Operating System: ULTRIX-32, UNIX* (Berkeley, System III, System V), VMS

Keywords: • Menu handlers • Text management
• Word processing

The XED Word Processing System is a sophisticated general-purpose word processor designed for maximum flexibility and operator convenience. Minimum memorization of commands is required, and all commands may be accessed by either function keys or optional menus. The word processor also features a tree-structured, recursive menu processor that can access related XED office system software for form generation, data entry, document management, and user-defined programs. Complete file management utilities are provided by menu selections.

Features include multiple spooler drivers and printer daemons for either draft printers or fully proportional letter-quality printers, balance sheet mathematic functions with decimal tab editing functions, an embedded interactive spelling checker with a systemwide dictionary and user-defined local dictionaries, automatic paragraph numbering and outlining, automatic footnoting, phrase and paragraph glossaries, a floating text-variable form letter merge program, variable line spacing within a document, column block editing, second-file editing, and 12 programmable tab rulers per document.

The word processor is completely interfaced with other office systems manufactured by Computer Methods, Ltd. XED office system programs are designed and coded for UNIX* Version 7, System III, System V, and Berkeley 4.1 and 4.2 and contain a terminal description file and a printer definition and proportional spacing increment table (both user definable) to provide maximum installation flexibility and efficiency in a multiuser environment. XED is loaded in the UNIX* multitasking operating system as a shared text file.

Computer Methods, Ltd., provides training, an operator's reference and installation manuals, as well as a command summary and a manual for the XED menu processor.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Ted Ferguson
(818) 884-2000

COMPUTER METHODS, LTD.

P.O. Box 3938
Chatsworth, CA 91313

Xerox Network Services

Operating System: VMS

Keywords: • Electronic mail • File transfer • Networking
• Printing

Distribution medium: magnetic tape.

This system allows VAX models 11-725 through 785 to access Xerox Network Services running on Ethernet. Text files can be printed on a Xerox networked electronic printer to store/retrieve files on Xerox file services. In addition, the software permits networked workstations or personal computers running VT100 emulation to directly connect to the VAX over the Ethernet. Finally, the software supports remote terminal access to Xerox network remote hosts, including other VAXs, and provides built-in diagnostic tools. The system can be run with either the DIGITAL DEUNA Ethernet controller board or the Interlan NI1010A Ethernet controller board.

Price: \$9995

Contact: Dennis Frahmman
(415) 496-6088
XEROX CORP.
2100 Geng Road
Palo Alto, CA 94303

XWORD

Operating System: VMS

Keywords: • Mailing lists • Text management
• Word processing

Memory required: 256KB.

XWORD, written in BASIC-PLUS-2, provides for entering and editing any size letters and documents, as well as comprehensive error detection and correction. The package provides the user with text editing and word processing capabilities; an intelligent screen editor; character, word, line, and page commands; paragraph and cut and paste; automatic search, macro, abort, and undo commands; list processing

and sorting; parametric letter processing; text and document preparation; multiple user/device support; copy, transfer, run-off, and queue commands; a menu-driven system and a help key; document comparison; spell checking and correction; local and remote-station capabilities; and the latest hardware and software technology.

The name and address files are used primarily to store information on organizational members, customers, debtors, employees, vendors, and so on. The letter-processing capabilities provide for mailing inquiry responses, announcements, newsletters, proposals, requests for bids, invitations, contracts, resumes, and more. The text of the document may include positional directives and parameters to be replaced with other information from the user terminal or the name and address file, personalizing each letter or document.

A version of this product is available for the PDP-11 computer.

Price: \$1000

Contact: Madlen R. Connor
(614) 231-2130

MBA SYSTEMS AUTOMATION, INC.
3477 E. Livingston Street
Columbus, OH 43227

ZCHART — Business Graphics

Operating System: VMS

Keywords: • Device drivers/handlers • Graphics
• Presentation aids

ZCHART is a versatile business graphics package. This portion of the Zeta plotter software produces multicolor line, bar, variance bar, and pie charts created in an interactive session by the user's response to simple, English-language questions. Plot description and data files are stored separately, allowing the user to run new data with an existing chart design or the same data with a different chart design.

ZCHART is a FORTRAN program that makes use of Zeta's Fundamental Plotting Subroutines. The program is designed for easy use by non-programmers. Attractive charts can be produced quickly and accurately by answering the simple questions asked by ZCHART.

A version of this product is available for the PDP-11 computer.

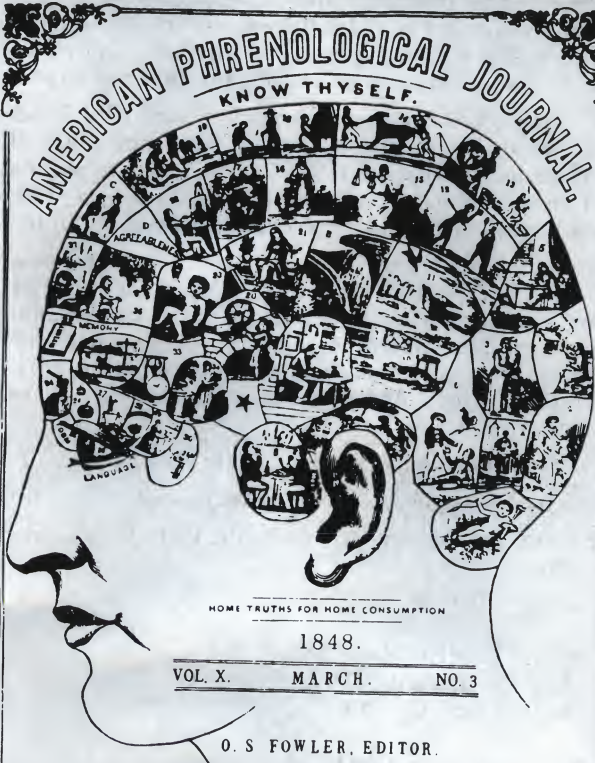
Price: \$1500

Contact: Bill Manos, Product Manager
(415) 372-7568

NICOLET COMPUTER GRAPHICS DIVISION
777 Arnold Drive, P.O. Box 3020
Martinez, CA 94553

Operating Systems

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AIM Benchmark — Suite I

Operating System: ULTRIX-32, UNIX* (Berkeley)

Keywords: • Decision support • Diagnostics • Research

Memory required: 200K bytes. Distribution medium: 9-track 1600 bpi magnetic tape.

Suite I provides nine distinct tests consisting of shell scripts with C programs for portability to a wide range of hardware configurations. AIM Benchmark Suite I measures the various aspects of UNIX* system multiuser performance and end-user throughput, including evaluation of command completeness and C compiler efficiency, evaluation of performance under simulated multiprocess editing and sorting tests, CPU looping speed, and throughput measurements of system components vital to the performance level of the multiuser environment.

With more than 150 major corporations licensing AIM Benchmarks, Suite I has become the industry standard for comparing UNIX* systems performance, evaluating UNIX* systems before purchase, providing a progress monitor/management aid during UNIX* system development/integration phase, and examining system tuning effects.

AIM Benchmark Suite I is provided with user documentation and sample benchmark results from VAX/750, VAX/780, and PDP-11/70 for comparison. Suite I runs in approximately 45 minutes on an unloaded VAX/750 and produces about 15 pages of report output. Summaries from previous runs can be replotted for comparison. Output is suitable for line printer or screen. Additional tests can easily be created, using similar report formats.

Suite I also requires shell, awk, sed, and join system calls.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$1650

Contact: Jamie Mendez
(408) 727-3711

AIM TECHNOLOGY, INC.
4655 Old Ironsides Drive, Suite 390
Santa Clara, CA 95050

AIM Benchmark — Suite II

Operating System: UNIX* (Berkeley, System III, System V)

Keywords: • Data collection • Decision support • Purchasing
• Report writer

Distribution medium: 9-track 1600 bpi magnetic tape.

The two Suite II C programs, QBENCH and SELECT, perform measurement tests and generate reports. Additionally, 10 text files define evaluation criteria, a make file, and a shell script for generating executive summaries.

QBENCH steps through 36 tests measuring various hardware/system functions. Each test is run for 2 to 20 seconds until a stable time is measured, and three repetitions of each test are averaged for final reading. As QBENCH progresses, the results of each performance test are displayed on the console screen. Typically, QBENCH takes 10 to 20 minutes of single-user time to compile and develop all measurements and then prints the raw data obtained in report form.

After printing the performance report, QBENCH automatically appends the results to a cumulative data base "qoutput." Data in "qoutput" can be evaluated immediately, or the user can run QBENCH on additional systems to augment the data base before comparison.

The Suite II report generator (Select) evaluates up to 20 systems simultaneously from the data base. Evaluation is controlled by specifying "application mixes to consider." Ten predefined mix files are supplied with Suite II, reflecting typical vendor procurement considerations.

For each mix considered, two supporting reports can be printed: a system-by-system point ranking and a test-by-test Kiviat diagram. The executive report generator (View) encapsulates everything into a single printer plot displaying for each named system its projected performance range.

The distribution medium is System III, System V, Version 7, and Berkeley 4.1, 4.2 compatible. All source is written in plain, portable C; scripts are written for the Bourne Shell. Systems to be tested need as a minimum a C compiler with floating point; the fork, getpid, and umask system calls; 72K bytes memory; a 60 Hz system clock; and 1500 blocks of temporary disk space. The system used to generate evaluation reports additionally needs C library with sine and cos, Bourne Shell and sed command, and a character or line printer.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$3450

Contact: Jamie Mendez
(408) 727-3711

AIM TECHNOLOGY, INC.
4655 Old Ironsides Drive, Suite 390
Santa Clara, CA 95050

ALSP (Applications-Level Security Package)

Operating System: VMS

Keywords: • Data base management • Security

Distribution media: TU58 DECTape II cartridge, magnetic tape.

This security package can be incorporated with your applications to provide and enhance your system security. Security is three levels deep: Level I, log on; Level II, major functions; and Level III, minor functions. A stand-alone user-authorization maintenance program is included.

The package features automatic logout after three consecutive log-on failures, an unlimited number of authorized users, up to 20 each of user-defined major and minor options, and authorized-user data file encryption. Programs run in native VAX mode and adhere to VMS universal calling standards for parameter passing. The package is written in COBOL. A user's manual and an applications interface manual are included.

Price: \$650 – \$2000

Contact: Sales Department
(201) 884-0892

INTEGRATED SYSTEMS, INC.
170 Algonquin Parkway, P.O. Box D
Whippany, NJ 07981

ANSWERBAC: A Program for Printing the Contents of an Answerback Message

Operating System: VMS

Keywords: • Security

This program prints the contents of the answerback message on the screen. The program was developed to thwart vandalous efforts by displaying the answerback message in a harmless way. DECUS number VAX-79.

Restrictions: This program works only with a baud rate of 1200 or greater.

Price: \$5 – \$225

Contact: DECUS (see Introduction)

Array Processor Support Under UNIX*

Operating System: ULTRIX-32, ULTRIX-32m

Keywords: • Development tools • Device drivers/handlers
• Scientific • Signal processing

Distribution medium: 9-track 1600 bpi magnetic tape.

This program allows the use of Floating-Point System's peripheral array processors under the UNIX* operating system and provides complete support for both PDP-11 and VAX host computers running all common versions of UNIX* (Bell, Berkeley, and ULTRIX). The package is written in C, lex, and yacc, and complete source code is provided. The package consists of a device driver; program development aids, such as assembler, linker, simulator, and vector function compilers; and a set of comprehensive math libraries.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$5000 - \$10,000

Contact: Dr. Peter H. Berens
(619) 484-0074

APUNIX COMPUTER SERVICES
1380 Garnet Avenue, Suite E-292
San Diego, CA 92109

ARSAP (Resource Management and Chargeback System)

Operating System: VMS

Keywords: • Accounting • Billing • Operations • Scheduling

ARSAP produces resource management and billing reports that allow users to monitor system usage and charge for all resources used on the computer. Resource management reports necessary for planning, organizing, and controlling the computer in a multiuser, multitask operating environment are provided to optimize work scheduling and system usage control. Billing reports that automatically distribute computer charges on a user, department, project, or client basis guarantee the recovery of computer costs for the purpose of internal accounting or for billing outside projects and clients.

ARSAP provides easy-to-read, managerial-style reports on terminal, disk storage, CPU, I/O, and memory utilization by user, project, or departments (up to five levels). Those reports improve system and staff productivity, help plan for future system requirements, and justify any necessary system upgrades by accurately tracking resource usage.

Billing reports include summary and detailed usage and rate information. Detailed numbered invoices provide complete itemized statements for each account by showing the resources used and the charges for the billing period. Rates can be set for individual accounts and first, second, third, and holiday/weekend shifts. Shift accounting allows different rates to be charged for premium time and slow periods, thus achieving optimum system usage.

The user can tailor reports to meet specific needs by selecting from numerous report formats and specifying report variations (for example, sort order). That flexibility provides the control needed for meeting current demands and predicting future requirements. Detailed documentation, DATATRIEVE procedures, and source code sample programs allow for easy custom modifications. No SYSGEN is needed for installation, and ARSAP takes only minutes to install.

A version of this product is available for the PDP-11 computer.

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Price: \$2995 – \$3995

Contact: Sales Department

(301) 864-3700

GEJAC, INC.

P.O. Box 188

Riverdale, MD 20737

AUTOLOG: Automatic Logoff Program

Operating System: VMS

Keywords: • Operations • Security

Memory required: 5KB.

This program automatically logs out inactive users by stopping processes that have no image in execution, no subprocesses, and no apparent activity. The inactivity is indicated by no change in CPU time, buffered I/O, and direct I/O counts for a settable time. DECUS number VAX-111.

Price: \$5 – \$225

Contact: DECUS (see Introduction)

AUTOLOG Utility

Operating System: VMS

Keywords: • Operations • Security • Software utilities

This system manager utility complements the AUTHORIZE utility. AUTOLOG allows the system manager to declare, remove, and list associations between physical terminals and VMS accounts. Those assignments are recorded and indexed by terminal name into the SYS\$SYSTEM:SYSALF.DAT file, which is consulted at log-in time by the LOGINOUT image. User name inquiry is then skipped if an assignment is found for the calling terminal. That allows a line to be dedicated or restricted to a specific account and in turn increases the system manager's ability to protect private accounts. On-line help and DCL foreign command invocation are provided. DECUS number VAX-112.

Price: \$5 – \$225

Contact: DECUS (see Introduction)

THE BRIDGE™

Operating System: VMS

Keywords: • Development tools • Personal computing
• Programming tools • Simulation

Distribution medium: 9-track 1600 bpi magnetic tape.

Developed by Virtual Microsystems, THE BRIDGE emulates a standard CP/M® environment, runs under the host VAX/VMS and RSX operating systems, and appears to build a virtual microcomputer that may then be used to run standard CP/M software or to provide a CP/M software development environment. THE BRIDGE is a true simulator and includes a license for the CP/M Version 2.2 operating system.

Files used with THE BRIDGE are stored on hard disk in CP/M format. To take advantage of the larger disk environment, the virtual floppies may range in size from one-quarter megabyte to four megabytes. Utilities are provided to transfer data from 8" standard CP/M diskettes (3740 IBM single density with CP/M directory structure) to virtual floppies and from virtual floppies to diskette and to convert CP/M format files to and from Files-11 format.

THE BRIDGE emulates the operation of the Intel 8080 executing CP/M and therefore cannot be expected to run as quickly as the actual microprocessor. Depending on system configuration and loading, the VAX/VMS version will execute an instruction 7 to 10 times more slowly than a dedicated microprocessor, with apparent speed resembling 1200 baud communication. The RSX-11M and RSX-11M-PLUS implementation will execute an instruction 10 to 15 times more slowly, with speed resembling 800 baud communication.

THE BRIDGE supports the full 8080 instruction set and all CP/M calls except IN, OUT, LIST STATUS, PUNCH, and READER. Most CP/M application software may be run on THE BRIDGE, except software designed to run only on specific machines, such as cursor control keys. CP/M communications software requiring specific port assignments or graphics requiring memory mapped video hardware cannot be used with THE BRIDGE.

DIGITAL distributes this software product under license from Virtual Microsystems, 2150 Shattuck Ave., Suite 720, Berkeley, CA 44704.

Refer to SPD #A0.48.xx when requesting further information on this product from your local DIGITAL sales office.

THE BRIDGE™ is a trademark of Virtual Microsystems. CP/M® is a registered trademark of Digital Research, Inc.

A version of this product is available for the PDP-11 computer.

Price: \$2500 - \$3500

Contact: Consult your local DIGITAL sales office (see Introduction).

C EXECUTIVE™

Operating System: UNIX* (Berkeley, System III, System V), VMS

Keywords: • Data collection • Graphics • Process control
• Real time

C EXECUTIVE is designed for hardware configurations in which disk subsystems are not appropriate for either economic or environmental reasons. Ideally suited to high-volume, low-cost, board-level products, C EXECUTIVE may be used for data acquisition, graphic data entry, intelligent terminals, and process control.

C EXECUTIVE allows multiple C or Pascal tasks to run concurrently with intertask communication, resource coordination, and formatted I/O. The real-time preemptive scheduler is sensitive to both task priority and system events. Multiple user terminals, if needed, can be supported with UNIX*-like characteristics.

Included is a comprehensive portable library containing more than 100 routines for memory management, character string manipulation, and I/O. The library has been specially designed for ROM-based systems. Other features are clock support, time-based task scheduling, and other features for real-time applications.

Aside from a few routines dedicated to disk I/O, all Pascal standard procedures and functions and the entire standard UNIX* C library are also supported. C EXECUTIVE is highly portable, since it is written almost entirely in C.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$500 - \$5000

Contact: Deborah A. Fullam, Technical Staff Member
(215) 628-0846

JMI SOFTWARE CONSULTANTS

P.O. Box 481

Spring House, PA 19477

Comprehensive VAX Demonstration Package

Operating System: VMS

Keywords: • Presentation aids

Memory required: 70KB.

This demonstration package shows what the beast is made of and what software is available. If you do not have a particular item in the demo, list EDIT MODULE.FILE to change the demonstration modules available. For a complete description of the functions of each file for this demonstration, look at the file DEMODES.TXT. DECUS number VAX-101.

Price: \$5 - \$225

Contact: DECUS (see Introduction)

CP/M-86 for DIGITAL**Operating System:** VMS**Keywords:** • File transfer • Microprocessor development
• Personal computing

CP/M-86 for DIGITAL allows Q-BUS and UNIBUS machines access to CP/M-86 software. DIGITAL users can now run CP/M-86 application programs simultaneously with their own DIGITAL application programs. CP/M-86 for DIGITAL allows the user to use all the high-quality devices (terminals, disk drives, hard disks, printers, and so on) associated with DIGITAL minicomputers for a CP/M-86 environment. The package gives the user file-transfer capability. If the user is in CP/M-86 and needs access to a DIGITAL file, the DIGITAL file can be copied to be readable and writable in CP/M-86 format and vice versa.

CP/M-86 for DIGITAL is available for all LSI-11, PDP-11, and VAX computers. Logcraft offers similar products for running CPM-80 or PC-DOS on DIGITAL LSI-11, PDP-11, and VAX computers. Cardware is available under RT-11, TSX-PLUS, RSX11M/M-PLUS, RSTS/E, VMS, and UNIX.* The software is normally shipped on standard 8" diskettes. Upon request, cardware is available on a variety of DIGITAL-compatible media.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$1595 - \$4795

Contact: Betty J. Pietrzyk
(603) 888-4448
LOGICRAFT, INC.
3 Graham Drive
Nashua, NH 03060

CP/M® for DIGITAL**Operating System:** VMS**Keywords:** • File transfer • Microprocessor development
• Personal computing

CP/M for DIGITAL allows DIGITAL Q-BUS and UNIBUS machines access to CP/M software. DIGITAL users can now run CP/M application programs simultaneously with their own DIGITAL application programs. CP/M for DIGITAL allows the user to use all the high-quality devices (terminals, disk drives, hard disks, printers, and so on) associated with DIGITAL minicomputers for a CP/M environment. The package gives the user file-transfer capability. If the user is in CP/M and needs access to a DIGITAL file, the DIGITAL file can be copied to be readable and writable in CP/M format and vice versa. Communications capabilities are also included.

CP/M for DIGITAL is available for all LSI-11, PDP-11, and VAX computers. Logcraft also has similar products for running CP/M-86 and PC-DOS on DIGITAL PDP-11 and VAX computers. Cardware is available under RT-11, TSX-PLUS, RSX11M-PLUS, RSTS/E, VMS, and UNIX.* The software is normally shipped on standard 8" diskettes. Upon request, cardware is available on a variety of DIGITAL-compatible media.

CP/M® is a registered trademark of Digital Research, Inc. * UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$1195 - \$3595

Contact: Betty J. Pietrzyk
(603) 888-4448

LOGICRAFT, INC.
3 Graham Drive
Nashua, NH 03060

CURRPARAM.COM: A Command Procedure for System Parameters

Operating System: VMS

Keywords: • Operations

This command procedure informs you of some of the system parameters needed for software installations. The procedure displays used and unused global sections and pages, buffered byte quota, enqueue quota, direct I/O limit, buffered I/O limit, open file quota, and AST limit. The procedure is written in DCL and requires CMKRNL or SETPRV privilege.

No documentation is included. The procedure is invoked when you run VMSINSTAL or VMSUPDATE. DECUS number VAX-82.

Price: \$5 - \$225

Contact: DECUS (see Introduction)

DISKUSAGE

Operating System: VMS

Keywords: • Disk utilities • Operations • Statistics

This program lists UFD directories and associated subdirectories that contain files and take up disk space. Included in the created report are the number of blocks, the number of files, and the percent of disk space that a directory and its subdirectories consume. The program is best run at night in a batch. DECUS number VAX-110.

Price: \$5 - \$225

Contact: DECUS (see Introduction)

DT07**Operating System:** VMS**Keywords:** • Communications • Device drivers/handlers
• Operations • Pre- and postprocessors

Distribution media: 9-track 1600 bpi magnetic tape, RX01, TU58 DECtape II cartridge.

This software allows the VAX/VMS operating system user to electronically connect a section of switchable UNIBUS and all attached peripherals to the user's system. When the DT07 is connected, the switched peripherals operate as if they were permanently attached to that system. When the DT07 is disconnected, the switched peripherals are removed and can connect to another system. Up to four systems can share a single switched UNIBUS through the DT07.

VAX DT07 consists of a driver and a bus switch manager. The driver controls the DT07, monitors its activities, supports the connect and disconnect functions, and handles associated system-level housekeeping tasks for each processor. The bus switch manager provides a link between the user and the DT07 driver. The bus switch manager also maintains information about the switched UNIBUS users and the status of operations controlling the switched UNIBUS.

Refer to SPD #25.88.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$2500

Contact: Consult your local DIGITAL sales office (see Introduction).

EUNICE**Operating System:** EUNICE**Keywords:** • Device drivers/handlers • File transfer
• Source code control

EUNICE allows VMS users to choose VMS mode, UNIX* mode, or integrated VMS/UNIX* mode and provides a complete UNIX* environment; with all its attendant benefits and features, without interfering with VMS. EUNICE also capitalizes on many of the powerful features of VMS to further enhance UNIX* capabilities. EUNICE offers support of both UNIX* and VMS file formats, mapping of VMS directories into UNIX* format, and manipulation of data using UNIX*, VMS, or both.

Features include full 4.1 BSD UNIX* compatibility; full VMS compatibility; use of VMS device drivers, ensuring standard DIGITAL device support; extensive text processing and data manipulation utilities; high-level languages, including C, FORTRAN-77, LISP, Pascal, and Franz LISP; compatible file, device, and interprocess I/O; shell command language (SH and CSH); interprocess communication (pipes); command chaining; complete UNIX* networking software (UUCP, CU, UUX, UULOG); Source Code Control System (SCCS); compiler-compiler (YACC); lexical analyzer (LEX); full-screen (VI) and line

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(ED) editors; formatter for letter-quality output (NROFF); phototype-setter formatter (TROFF); preprocessor for mathematical equations (EQN); preprocessor for tables (TBL); and on-line documentation (MAN).

* UNIX is a trademark of AT&T Bell Laboratories.

Price: \$7950 – \$16,000

Contact: Nancy Linde
(415) 962-7200

THE WOLLONGONG GROUP
1129 San Antonio Road
Palo Alto, CA 94303

Everhart/Hoffing RSX Collection

Operating System: VMS

Keywords: • Disk utilities • Presentation aids
• Programming tools • Software utilities

This collection of utilities, subroutines, and games for use with RSX-11M is generally documented in README and .HLP files and is intended for use by experienced programmers. The collection includes a utility to list BRU tapes (BRUDIR), a high-speed tape-to-disk/disk-to-tape reproduction program that uses disk container files (BIGTPC), an updated version of DDT22, multifile virtual disk support, a maze game, and other software.

No guarantees are made as to the completeness, usability, or quality of the programs on this tape. The material has not been checked or reviewed by DECUS, and documentation may or may not be included.

Documentation is on magnetic media. DECUS number 11-SP-34.

A version of this product is available for the PDP-11 computer.

Price: \$5 – \$225

Contact: DECUS (see Introduction)

EZLOG

Operating System: VMS

Keywords: • Cost accounting • File management • Operations
• Security

This extension to the VAX/VMS log-in procedure accounts for system use by account, project, and user. EZLOG features simple user names and projects that encourage user cooperation in specifying projects worked on, allows account managers rather than system managers to control access to projects, separates disk files by project or user, and provides an optional second level of password protection with optional attempted log-in recording.

EZLOG helps users spread their computing charges over several projects or cost centers. EZLOG is an add-on option to PACS, a VAX/VMS process accounting and chargeback package from Signal Technology, Inc.

Price: \$1200

Contact: Software Sales
(805) 683-3771

SIGNAL TECHNOLOGY, INC.
5951 Encina Road
Goleta, CA 93117

EZTRACK (Tracking Resource Accounting System)

Operating System: VMS

Keywords: • Cost accounting • Data collection • Operations
• Software utilities

This reporting and query utility tracks resource use at the individual session and image level. EZTRACK offers a flexible and general approach to resource monitoring, reporting, and summarization of log-in sessions and program images. For those who need chargeback, as well as detailed resource tracking, EZTRACK operates hand in hand with Signal Technology's PACS software. Together, PACS and EZTRACK monitor and track the costs of work session in the system.

Price: \$1200

Contact: Software Sales
(805) 683-3771

SIGNAL TECHNOLOGY, INC.
5951 Encina Road
Goleta, CA 93117

Group Disk Usage Utility Program

Operating System: VMS

Keywords: • Cost accounting • Disk utilities • Operations

Memory required: 2MB.

This subdirectory gives a written report about block usage. The program is written to purge all files in an upper directory — [ACCOUNT] — on DUA1:. This upper directory should be changed if the disk or the directory is different. All files created will be found in DUA1:[ACCOUNT] directory. Keep in mind that privileges are necessary. The SYSUAF.LIS must be updated when running AUTHORIZE.

When the program is run for the first time, errors will appear, since some of these files must be deleted before starting. Change group numbers to accommodate your site as well as the disk name. Create an upper directory called [ACCOUNT] or change the program to suit your site. DECUS number VAX-104.

Price: \$5 - \$225

Contact: DECUS (see Introduction)

H-CHAMP

Operating System: ULTRIX-32, UNIX* (System III, System V)

Keywords: • File management • Pre- and postprocessors
• Software utilities

H-CHAMP, an applications environment, is a commercial interface that provides utility software tools for multiuser microcomputer systems. It provides a user-friendly environment so that end users need never deal with the operating system. Optional modules deliver utility tools to speed and simplify sorting, information handling, file archiving, and report modifying. Additional H-CHAMP modules feature procedures, automated batch processing, report scheduling, and print formatting. H-CHAMP runs on the de facto standard operating systems for 8080/8085/Z80, 8086/8088, Z8000, and 68000 families of hardware.

The H-CHAMP Core Module includes user menus, access and security, the shell, housekeeping, mail, and directory and file handling. H-CHAMP optional modules are H-CHAMP + I Module, sorting and information handling; H-CHAMP + II Module, archiving and text formatting; H-CHAMP + III Module, procedures and batch processing; and H-CHAMP + IV Module, report scheduling, formatting, and print control.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$995

Contact: Lew Silverstein
(408) 246-8300

HELMSMAN SYSTEMS, INC.
1030 S. Winchester, Suite 205
San Jose, CA 95128

INFO: Performance Measurement Tool to Display Top CPU Procedure Within Program

Operating System: VMS

Keywords: • Security • Statistics

This performance measurement tool displays a bar chart of the eight most compute-bound procedures within a running program image. INFO reads the image's debug symbol table into memory and then histograms the program counter saved in the hardware process control block. Every three seconds (user-selectable), a sorted display of the eight most compute-bound procedures is printed on the user's terminal.

INFO should be installed as a known image with CMEXEC privilege. The other privileges required (ALTPRI, BYPASS, WORLD) are dynamically granted during execution, using the \$SETPRV system service. Because INFO runs as a separate process, the user does not have to modify the source code or relink the executable image file. DECUS number VAX-77.

Restrictions: INFO requires CMEXEC, world privilege. The target process must not be swapped out.

Price: \$5 - \$225

Contact: DECUS (see Introduction)

IS/WB (Interactive System/Workbench)

Operating System: VMS

Keywords: • Programming tools • Text management
• Word processing

IS/WB is a general-purpose, multiuser, interactive system based on Bell Labs' System III. The system provides a flexible working environment and a uniform set of tools for program development, document preparation, and text processing.

Price: Available upon request

Contact: Ted White

(213) 450-8363

INTERACTIVE SYSTEMS

1212 7th Street

Santa Monica, CA 90401

jnet™

Operating System: VMS

Keywords: • Electronic mail • File transfer • Networking

Distribution media: RX01, TU58 DECtape II cartridge.

This networking software product allows VMS users to exchange files, electronic mail, and real-time messages with IBM VM/CMS users. This product enables peer-to-peer communication among VAX and IBM 370 and 43xx and 308x computers using IBM's RSCS (Remote Spooling Communications Subsystem) protocol. Designed for communication among interactive users, jnet users need no special training to originate file transfers, mail, and messages. The program provides simple commands for VMS users, which correspond to the TELL, NOTE, and SENDFILE commands of VM/CMS. VAX and IBM users need not learn the commands or file systems of an unfamiliar operating system. Thus, nontechnical users, as well as programmers, can benefit from the network.

VAX systems communicate with the RSCS network by means of a DUP11 interface and a bisynchronous communication line at up to 9600 baud. The DT link driver, new in jnet V1.1, extends the RSCS network over a DECnet to other VAX-11 systems licensed for and running

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jnet, with no additional investment in data-communications hardware or leased lines. A conversational VMSUPDATE session performs most installation tasks. The product has been installed at more than 35 industrial and academic sites since its introduction in December 1983 and is available with full support.

Price: \$900 - \$11,000

Contact: Sandra L. Ingham
(608) 238-8134

JOINER ASSOCIATES INC.
732 N. Midvale Boulevard
Madison, WI 53705-0445

LOCK

Operating System: VMS

Keywords: • Menu handlers • Security

LOCK permits user accounts to be configured into restricted menus, limiting each user to an authorized set of programs. Users at any level of privilege can be restricted. LOCK is menu driven and may be used to create on-line help facilities and documentation. LOCK can make the system friendlier and easier to use, as well as prevent access to unauthorized programs.

A version of this product is available for the PDP-11 computer.

Price: \$850

Contact: Carolyn Clyde
(801) 224-5306

CLYDE DIGITAL SYSTEMS, INC.
P.O. Box 4500
Provo, UT 84603-4500

M (MUMPS)

Operating System: M (MUMPS)

Keywords: • Data base management • Financial management
• Health care • Language processors

This easy-to-use high-performance programming system provides a complete software environment for developing and running application programs. A language, a data base system, and a set of utilities are included.

Structured around ANSI-Standard MUMPS, a data base-oriented language, this system offers significant advantages in applications requiring frequent file access. Some of those applications are billing and accounting, order entry, word processing, office automation, and medical record keeping. Featured advantages include fast software development; high throughput and rapid response; a dynamic, fully integrated data base system; interactive programming; easy operation; and growth through multiprocessing.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: David Rozewski
(617) 227-1555
INTERSYSTEMS CORP.
210 Commercial Street
Boston, MA 02109

MAINSAIL™ Runtime System

Operating System: ULTRIX-32, UNIX* (Berkeley), VMS

Keywords: • Programming tools

This system is written in MAINSAIL, a sophisticated general-purpose programming language that supports true source-level portability across computing systems. The system provides an identical execution environment for programs written in MAINSAIL, regardless of the computing system.

The MAINSAIL Runtime System features a robust execution environment; full specification of input/output; sequential and random access; a full set of data types, with guaranteed data ranges; exception handling; variable-length character strings; garbage collection for strings, arrays, records, and modules; low-level data types for interfacing to operating systems; and intermodule linkage and loading, eliminating use of the host system linkage editor.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$870 - \$6930

Contact: Greg Jirak
(415) 324-8745
XIDAK, INC.
530 Oak Grove Avenue, Suite 101
Menlo Park, CA 94025

MicroVMS Operating System

Operating System: MicroVMS

Keywords: • Development tools • Diagnostics
• Microprocessor development • Software utilities

Distribution medium: RX50.

The MicroVMS operating system supports the MicroVAX I/II and VAX station I/II and is fully compatible with VAX/VMS. MicroVMS provides the same features as VAX/VMS on any other single VAX processor, with the exception of compatibility mode. MicroVMS is VAX/VMS repackaged for the microcomputer environment.

MicroVMS is suitable for both time-sharing and production environments. Time-sharing users can work interactively with the system and submit batch jobs. Processor-intensive, I/O-intensive, and real-time jobs, in any mix, perform well on MicroVMS. The system permits an

absolute limit of 8192 concurrent processes. However, the amount of work supported at one time with good performance depends on the types of processing performed, as well as on the physical memory and secondary storage available.

The MicroVAX architecture is a subset of the full VAX architecture; consequently, some instructions are not implemented in the hardware. MicroVMS provides instruction emulation for all native VAX instruction not implemented in the MicroVAX hardware. That emulation is transparent to the user. However, compatibility mode is not available on MicroVAX.

Refer to SPD #28.05.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$2000 – \$8000

Contact: Consult your local DIGITAL sales office (see Introduction).

MIIS/MAGIC (MEDITECH Interpretive Information System)

Operating System: MIIS/MAGIC

Keywords: • Application development • Data base management
• Development tools • Interpreters

MIIS/MAGIC is a software environment for the development and operation of application programs. The system includes:

- MIIS/MAGIC operating system, which schedules the use of the computer's resources and performs the operations specified by application programs.
- MIIS/MAGIC language interpreter, which translates application programs into actions executed by the operating system. The system supports a single language, also called MIIS/MAGIC.
- MIIS/MAGIC data-management system, which uses a single hierarchical balanced-tree structure to store disk-based data. Thus, programmers can create complex data bases while preserving economy of storage and speed of data access. The programmer need be concerned only with the data's logical structure; MIIS/MAGIC automatically manages physical storage of the data.
- MIIS/MAGIC utility programs, including monitoring system activity and loading, editing and relocating programs and data, measuring allocation and use of disk space, repairing damage done to system structures by hardware failures, and making back-up copies of on-line and archival data.

Complete documentation, including an interactive on-line training program, is available.

A version of this product is available for the PDP-11 computer.

Price: \$15,000

Contact: David Hamilton
(617) 354-3000

MEDITECH
255 Bent Street
Cambridge, MA 02141

MOCS (Master Operator Control System)

Operating System: VMS

Keywords: • Information management • Operations

Memory required: 256KB.

This system, written in BASIC-PLUS-2, automates the process of computer operations and provides a comprehensive information-based approach for storage and retrieval of console device input and output. MOCS replaces the hard copy or CRT console devices with a turnkey system that provides easy operator access to multiple computers from one central location. That concept of centralizing operations control also accurately and reliably automates the routine operator procedures, without requiring operator intervention.

A data base records all console data received from the attached computers and stores it for future on-line inquiry. An optional hard-copy feature records the console data retrieved with a time and source stamp to a hard-copy device the user specifies.

A version of this product is available for the PDP-11 computer.

Price: \$15,000 - \$60,000

Contact: Madlen R. Connor
(614) 231-2130

MBA SYSTEMS AUTOMATION, INC.
3477 E. Livingston Street
Columbus, OH 43227

MORE/bsd

Operating System: MORE/bsd

Keywords: • Programming tools • Text management

MORE/bsd is a UNIX*-derived operating system and collection of languages, software tools, and utilities for VAX computers. Derived from the 4.2 BSD release of UNIX* system software, MORE/bsd provides a multiuser operating system, a number of languages — C, Pascal, FORTRAN-77, EFL, and franz LISP — three text editors, two output formatters, many software tools and utilities, and the INGRES data base management system. Both C and Bourne Shells are provided. MT XINU also includes the Source Code Control System and other utilities from Bell UNIX* System V.

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MORE/bsd is available in binary form, with full customer support for VAX-11/730, 11/750, and 11/780 computers. Additional applications programs that run under MORE/bsd are available separately. OEM inquiries are welcome.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: \$3500 - \$11,000

Contact: Alan Tobey

(415) 644-0146

MT XINU, INC.

739 Allston Way

Berkeley, CA 94710

ms-Board

Operating System: VMS

Keywords: • Data conversion

This product, developed by Virtual Microsystems, Inc., is a complete 16-bit virtual microcomputer system for UNIBUS machines. An integrated hardware/software system using the ms-Board coprocessor, this product runs MS-DOS, enables MS-DOS users to share printers and data, and allows users to run MS-DOS software on a DIGITAL UNIBUS system.

A version of this product is available for the PDP-11 computer.

Price: \$4000

Contact: Cheryl Pankratz

(714) 998-6041

MIDCOM CORP.

1940 N. Tustin Avenue, Suite 117

Orange, CA 92665

Observer

Operating System: VMS

Keywords: • Debugging • Diagnostics • Project management
• Software utilities

This VMS utility program allows a privileged user to view every character typed and output to another user's terminal. The target user is aware of being observed. The effect is that both the initiator and the target see the same screen at the same time.

Observer can help new users learn VMS and applications by having someone oversee their activity, provide immediate problem diagnosis, monitor any operator performance for time and motion studies, keep track of any intruders by monitoring activity on local or dial-up lines, and give remote demonstrations by having customers dial into the system and observe the terminal. Any number of lines can be observed simultaneously by privileged users. Observing can be initiated at any time, with or without the target terminal user's knowledge. Observer does not require null modems or other special hardware. Overhead is

very low because there are no data collection processes or pseudo-device drivers to lower system performance. Observer is written in BLISS.

Price: \$495

Contact: Arthur Cacossa
(212) 425-0200

PRECISION BUSINESS SYSTEMS, LTD.
33 Rector Street
New York, NY 10006

OS/RT (Real Time O.S. Kernel)

Operating System: None required

Keywords: • Communications • Instrumentation
• Process control • Simulation

This real-time multiprocessing operating system kernel for process control, instrumentation, simulation, and communications control applications is fully transportable to a variety of DIGITAL 8-, 16-, or 32-bit processors. OS/RT is developed in a high-level language, C, and is available in object or source code, with unlimited binary rights. OS/RT can be ROM or disk-based and provides the following operating system functions in a well-organized and modular structure: process management, process synchronization management, interrupt handling, memory management, and interprocess communications.

A version of this product is available for the PDP-11 computer.

Price: \$3000 - \$8000

Contact: Dennis Rieger
(408) 737-7211

THE DESTEK GROUP
830 East Evelyn Avenue
Sunnyvale, CA 94086

PACS (Process Accounting)

Operating System: VMS

Keywords: • Billing • Cost accounting • Operations
• Report writer

This system bills users, reports job costs, and monitors system use. PACS automatically collects and organizes disk storage and process accounting information and provides itemized reports on line at the user's request. Financial reports, including the final billing, can be generated. PACS permits generalized reporting periods, such as weekly, monthly, or 4-4-5 cycles. With Chargeback Billing, PACS reports the quantity used, unit cost, and expenditure for each billable resource, such as disk storage, connect time, CPU time, file input/output operations, and so on. Each account may have a different billing algorithm. PACS supports non-prime time charge periods, discounts for large-quantity usage, adjustments, fixed periodic charges,

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minimum charges, and other exceptional billing rules. Budgeting with log-in defeat is possible at the user name level as well as at the account level.

Price: \$3900

Contact: Software Sales

(805) 683-3771

SIGNAL TECHNOLOGY, INC.

5951 Encina Road

Goleta, CA 93117

PC/DOS for DIGITAL

Operating System: VMS

Keywords: • File transfer • Microprocessor development
• Personal computing

PC/DOS for DIGITAL allows Q-BUS and UNIBUS machines access to PC/DOS software. DIGITAL users can now run PC/DOS application programs simultaneously with their own DIGITAL application programs. The system allows the user to use all the high-quality devices (terminals, disk drives, hard disks, printers, and so on) associated with DIGITAL minicomputers for a PC/DOS environment. The package gives the user file-transfer capability. If the user is in PC/DOS and needs access to a DIGITAL file, the DIGITAL file can be copied to be readable and writable in PC/DOS format and vice versa.

PC/DOS for DIGITAL is available for all LSI-11, PDP-11, and VAX computers. Logcraft offers similar products for running CP/M-86 or CP/M-80 on all PDP-11 and VAX computers. Cardware is available under RT-11, TSX-PLUS, RSX11M/M-PLUS, RSTS/E, VMS, and UNIX.* The software is normally shipped on standard 8" diskettes. Upon request, cardware is available on a variety of DIGITAL-compatible media.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$2995 - \$6145

Contact: Betty J. Pietrzyk

(603) 888-4448

LOGICRAFT, INC.

3 Graham Drive

Nashua, NH 03060

PEGASUS

Operating System: EUNICE, VMS

Keywords: • Development tools • Networking

By locally processing terminal I/O and using the host system as a high-speed file server, PEGASUS assures users of a consistently fast response time. PEGASUS:

- Offloads CPU-intensive terminal management and distributes it, making additional CPU time available on the host computer
- Improves overall system response time for interactive users, increasing both their productivity and their enthusiasm
- Accommodates the addition of more interactive users, incrementally expanding the host system's capabilities
- Offers distributed processing for large application program modules, saving the host processor for CPU-intensive tasks
- Supports distributed processing via an ETHERNET communications system, which allows the host system(s) to expand in an open-network architectural environment
- Accommodates up to 160 types of terminals
- Offers the user a keyboard-transparent environment so that no change is required for any application-level programs to accommodate the integration of PEGASUS
- Protects the user's investment in existing software and increases the productivity of the host computer

Every member of the PEGASUS product family will support a maximum of 16 terminals in a fully configured system. PEGASUS also supports both Wollongong's Full Screen Editor and the "VI" Editor.

Price: \$34,950

Contact: Nancy Linde
(415) 962-7200

THE WOLLONGONG GROUP
1129 San Antonio Road
Palo Alto, CA 94303

PET (Performance Evaluation and Tuning)

Operating System: VMS

Keywords: • Information management • Operations

Memory required: 256KB.

PET, written in BASIC-PLUS-2, helps you understand, optimize, and control your computer resources. The system allows you to monitor your computer resources more efficiently by giving you reports, both written and graphic, detailing all critical functions of your system. PET collects statistics from the CPU, disks, and input/output devices to generate those reports.

PET uses very little disk space and places no burden on the CPU. PET can also perform capacity planning, by placing an artificial load on the system, allowing total control of response time. That feature is useful in maintaining a consistent operating environment for both large and small system users.

A version of this product is available for the PDP-11 computer.

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Price: \$4000 – \$7000

Contact: Madlen R. Connor
(614) 231-2130

MBA SYSTEMS AUTOMATION, INC.
3477 East Livingston Street
Columbus, OH 43227

polyFORTH II

Operating System: VMS

Keywords: • Compilers • Disk utilities • Language processors
• Programming tools

This multiuser software is designed for the professional who needs a high-performance product backed by a full support staff. The package includes FORTH, an interactive, multilevel language; a full complement of debugging aids; and the target compiler for PROM-based applications. The product includes a compiler, interpreters, a multiprogrammer, a text editor, virtual memory, an I/O assembler, a program listing, and disk-copying utilities, plus date and time support. Application-oriented features include data base support, a math library, and, on some systems, graphics.

A version of this product is available for the PDP-11 computer.

Price: \$600 – \$3200

Contact: Judy Pereira
(213) 372-8493

FORTH, INC.
2309 Pacific Coast Highway
Hermosa Beach, CA 90254

Prime Security System

Operating System: VMS

Keywords: • Security

This complete access security package for VAX computer systems records program use in a security file with full descriptions of the user, the time, the date, the terminal, and the method of access. Passwords are stored in an encrypted format and may not be displayed by the user or the security manager. A password change is required after a specified number of uses.

All programs controlled by the Prime Security System must be selected from an authorized menu. A program cannot be run directly from the command level. As an added security feature, a user's menu will be locked after five consecutive incorrect password attempts. The menu can be reactivated only by the security manager, who would have access to the release program. Additionally, the security manager can restrict any user from the system.

Reports are available that detail all access to the system and indicate time of access, date, user ID, user name, program used, and terminal used. Support, training, and installation are provided.

Price: \$2000 – \$4000

Contact: Salvatore Cangialosi
(212) 946-5796

PRIME ASSOCIATES, INC.
38 Paerdegat 7 Street
Brooklyn, NY 11236

PROMPT

Operating System: VMS

Keywords: • Operations

The PROMPT program allows a command procedure to prompt for input from the specified device and to have the response returned in a specified local symbol. This program works like the INQUIRE command, except that some of PROMPT's features, such as allowing the system start-up command procedure to prompt for options during system boot, permit special applications. One such feature is a timeout so the prompt will not wait forever; that way, start-up will continue booting if an operator is not present to answer questions, and the terminal that the prompt is sent to and reply taken from may be specified, such as OPAO:. Complete help instructions describe the program's use and syntax.

Documentation is on magnetic media. DECUS number VAX-25.

Price: \$5 – \$225

Contact: DECUS (see Introduction)

Quantum RS

Operating System: VMS

Keywords: • Billing • Cost accounting • Data collection
• Project management

Distribution media: 9-track 800/1600/6250 magnetic tape, RL02.

This resource management system includes summary and session accounting, project and department-level accounting, performance analysis, capacity planning, cost tracking, budgeting, and chargeback. Entirely menu driven, the system monitors and bills for system resources and software usage in VAXcluster, single, and network environments.

Accounting is done in either summary mode or summary and session modes simultaneously. Billable resources include connect time, CPU time, page faults, buffered I/O, direct I/O volumes mounted, pages printed, and disk storage. The system maintains information for more than 30 resources and 35 statistical measures and tracks the VMS system processes that contribute to VMS operating system overhead.

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The system accounts for resources on several levels, including node, account, project, user, and object for each of up to six user-defined shifts. A standard virtual logging utility allows users to change projects without going through log-in/log-out procedures. Budgeting includes a log-in defeat feature and current session cost and budget status displays. The system handles chargeback, including royalties, discounts, flat charges, and minimum and maximum amounts, with individualized rate setting. Collection of resource usage information can be run interactively or set to run automatically at a user-specified time. Reports are completely user-defined with a report generator feature.

Price: \$4500

Contact: R. Stephen Lilly

(617) 848-7515 or 1-800-232-5215

CIS

165 Bay State Drive

Braintree, MA 02184

Quickstar

Operating System: VMS

Keywords: • Communications • Operations • Security
• Software utilities

This set of utilities allows VAX/VMS users and managers to interact with the system quickly and efficiently, communicate with other users, and monitor system status. Quickstar consists of Quickchange, Quickstat, and Quicktalk. Quickchange allows a VAX user to change from one user name to another without the standard manual log-out/log-in steps. Quickstat provides for secure interactive monitoring of VAX system status, users, processes, and devices. Quicktalk is a rapid and complete interterminal communication utility.

Price: \$1700

Contact: Software Sales

(805) 683-3771

SIGNAL TECHNOLOGY, INC.

5951 Encina Road

Goleta, CA 93117

ROSS/V (RSTS/E Operating System Simulator for VAX)

Operating System: VMS

Keywords: • Communications • Programming tools
• Simulation • Software utilities

Distribution medium: 800/1600 bpi magnetic tape.

This software package provides a RSTS/E monitor environment for programs running in PDP-11 compatibility mode on VAX-11 CPUs under the VMS operating system, making it possible to run a wide variety of BASIC-PLUS and other RSTS/E-based programs on a VAX,

with little or no modification. ROSS/V is analogous to DIGITAL's Application Migration Executive, supplied with VMS, which provides an RSX-11M environment on the VAX in much the same way that ROSS/V provides a RSTS/E environment. Among the many RSTS/E features supported by ROSS/V are Concise Command Language (CCL) commands, multiuser read/write access to shared files ("update mode"), and concurrent use of multiple run-time systems.

No RSTS/E software is supplied with ROSS/V; any licensing required to use such software on the VAX should be arranged between the user and DIGITAL. ROSS/V is also available from Online Data Processing, Inc. (509) 484-3400.

Price: \$5500 - \$10,900

Contact: Martha A. Scott
(617) 861-0670

EVANS GRIFFITHS & HART, INC.

55 Waltham Street

Lexington, MA 02173

RSTS/E CCL Emulator

Operating System: VMS

Keywords: • Operations • Real time • Simulation

This package is a prototype implementation of the RSTS/E command language on VAX/VMS, using DCL procedures. The package is used to provide a somewhat RSTS-compatible command environment on VAX/VMS. The package is both a migration and a coexistence tool. For migration, the emulator helps a RSTS/E user to feel more comfortable on a VAX sooner and allows one to learn DCL at one's leisure. For coexistence, the package provides a subset-compatible command language for RSTS/E and VAX/VMS. Most of the CCLs that have any VAX/VMS equivalent were implemented. Because CCL/VAX runs on top of DCL, a RSTS/E user can issue RSTS/E commands as well as DCL commands in any order or combination, without changing modes.

Documentation is on magnetic media. DECUS number VAX-10.

Price: \$5 - \$225

Contact: DECUS (see Introduction)

RT/EMT (RT-11 Emulator)

Operating System: UNITY, VMS

Keywords: • Compilers • Interpreters • Simulation

RT/EMT gives you an RT-11 environment under the UNIX* operating system. RT/EMT lets you run RT-11 binary programs unchanged directly at the UNIX* command level. The RT-11 command interpreter supports RT-11 keyboard monitor commands, and RT-11 file systems are implemented by UNIX* directories. RT/EMT runs in user mode. No UNIX* operating system changes are required, and the characteristics of the RT V4 SJ monitor are supported.

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HCR supplies only the RT/EMT software. Any RT-11 package requires a license from DIGITAL.

A version of this product is available for the PDP-11 computer.

Price: \$1750 +

Contact: Sales Department
(416) 922-1937

HUMAN COMPUTING RESOURCES CORP.

10 St. Mary Street
Toronto, Ontario M4Y 1P9
Canada

SoftChip CP/M Emulator

Operating System: VMS

Keywords: • Microprocessor development

SoftChip, a CP/M emulator, enables the user to run any CP/M software on either Q-BUS or UNIBUS computers running RT-11, RSX-11M, or VMS.

A version of this product is available for the PDP-11 computer.

Price: \$495 - \$795

Contact: Norman Rogers
(408) 980-1678

DECMATION

3375 Scott Boulevard, Suite 422
Santa Clara, CA 94306

SoftShell

Operating System: ULTRIX-32, UNIX* (Berkeley)

Keywords: • Data collection • File management • Operations
• Text management

SoftShell is a full-screen interface to the UNIX* system. Users can enter commands either through a friendly form — the screen — or the line-by-line mode — the scroll. The two modes communicate. Even in the scroll, commands can be recalled, edited, and reexecuted. A user who knows the command, parameters, and options needed can enter them into the scroll. Otherwise, the user can execute a form of the command that prompts him/her for parameters and options, offering information about those options. Pipes, filters, and I/O redirection are available, and special interactive commands can be used.

The SoftShell interface has routines for displaying large trees on small screens. Applications, provided for displaying and traversing some of the most common tree-structured objects in UNIX*, are directory and process hierarchies and documents. In addition, C functions are included for operating on user-defined trees.

No change need be made to the underlying UNIX* programs. Any program can be invoked from the SoftShell. Users can also define their own forms — for example, for data collection — to interface with their applications.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$495 – \$995

Contact: Ilona A. Lappo
(617) 864-0137

LOGICAL SOFTWARE, INC.
17 Mount Auburn Street
Cambridge, MA 02138

SPM (Software Performance Monitor)

Operating System: MicroVMS, VMS

Keywords: • Data collection • Forecasting • Operations
• Statistics

VAX SPM is an integrated performance monitoring and analysis package useful for systems tuning, applications tuning, and capacity planning on VMS systems and VAXclusters. A system manager can use VAX SPM to easily collect and archive a complete set of performance statistics into one central performance data base. A systems troubleshooter can then replay problem scenarios by retrieving data from the performance data base. Or, an MIS manager can extract hardware usage statistics from the data base to generate reports for capacity-planning budget decisions. In addition, an applications programmer can extract data that pinpoints performance problems in languages such as FORTRAN, COBOL, BASIC, and more.

The disk analyzer in VAX SPM helps the system manager identify disks that are fragmented and need volume compression. VAX SPM measures both time usage and space usage of disks for a complete picture of volume utilization.

VAX SPM's powerful report generator provides resource versus time graphs by minute, hour, day, or a customer-defined unit. The report statistics quickly expose bottleneck resources as well as show long-term trends useful for extrapolation and what-if analyses.

A system manager can use the tracer component of VAX SPM to write a custom performance monitor. That is useful when writing device drivers, communications and network software, and user-written system services that need timing analyses.

Finally, the VAX SPM chargeback utility inputs VMS accounting data and outputs a billing report showing resource usages and charges.

Refer to SPD #SO.16.xx when requesting further information on this product from your local DIGITAL sales office.

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Price: \$2400 – \$6000

Contact: Consult your local DIGITAL sales office (see Introduction).

SYDISPLAY

Operating System: VMS

Keywords: • Operations • Query facilities • Security

Distribution medium: magnetic tape.

This command procedure allows the user to monitor a VMS system by using the F\$GETJPI lexical function to display information about various aspects of the systems. Displays show current activity. Three parameters can be passed to the procedure, or the user will be prompted for the input: the function requested, the display interval, and the output device. The procedure stops with a CTRL/Y. The displays are designed to take advantage of a VT100 terminal with advanced video option but also can generate recording files. DECUS number VAX-63.

Price: \$5 – \$225

Contact: DECUS (see Introduction)

SystemMaster

Operating System: VMS

Keywords: • Data base management • File management
• Operations

This package is designed for anyone responsible for operating and managing a VAX system. The program's easy-to-use menu-driven format automates the major tasks of system management. With little knowledge of the VAX/VMS operating system, one can readily perform most system manager functions, including disk volume management, user authorization, print queue and batch queue management, system backup, file restoring, setting/modifying terminal characteristics, system shutdown, and software update and installation.

SystemMaster has screen-oriented data entry and an extensive internal help facility. Each task is fully documented with help screens, providing the information required for task completion. Most of the system management tasks require the user to do little more than complete an input screen.

Price: \$1500 – \$7000

Contact: Abby Turner
(617) 273-5500 or (800) 227-1209

STRATEGIC INFORMATION

80 Blanchard Road

Burlington, MA 01803

ULTRIX-32 Operating System

Operating System: ULTRIX-32

Keywords: • Assemblers • Debugging • File management
• Programming tools

Memory required: 8MB. Distribution media: 9-track 1600 bpi magnetic tape, RA60, RK07, RL02.

This native UNIX* operating system for VAX hardware is derived from the fourth Berkeley software distribution (4 BSD), Version 4.2. Developed by the Computer Systems Research Group of the Department of Electrical Engineering and Computer Sciences at the University of California at Berkeley, 4 BSD is an augmented version of Bell Laboratories' UNIX* 32V system for VAX hardware. The Berkeley enhancements to UNIX* 32V include support for the VAX virtual architecture and a set of functional additions to the basic Bell Laboratories UNIX* product.

This interactive, demand-paged, virtual memory, time-sharing operating system has a hierarchical file system with demountable volumes, compatible device and interprocess I/O, asynchronous processes, a user-selectable system command language, disk quotas, job quotas, more than 200 subsystems, and a high degree of portability among processors.

Along with the functionality of the Berkeley 4 BSD system, DIGITAL has added a wide range of support service options, repackaged technical documentation, installation and configuration without source code, and UNIX* sublicensing for object code directly from DIGITAL.

Refer to SPD #26.40.xx when requesting further information on this product from your local DIGITAL sales office.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: \$12,000 – \$15,500

Contact: Consult your local DIGITAL sales office (see Introduction).

ULTRIX-32m Operating System

Operating System: ULTRIX-32m

Keywords: • File management • Programming tools
• Text management

Distribution medium: RX50.

This native UNIX*-derived operating system for MicroVAX hardware is derived from the fourth Berkeley software distribution (4 BSD), Version 4.2, developed by the Computer Systems Research Group of the Department of Electrical Engineering and Computer Sciences at the University of California at Berkeley. The ULTRIX-32m interactive, demand-paged, virtual-memory, time-sharing operating system has a hierarchical file system, compatible device and interprocess I/O, asynchronous processes, disk quotas, job quotas, and a user-selectable system command language.

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ULTRIX-32m is a repackaged and functional subset of the Berkeley 4 BSD system and of DIGITAL's ULTRIX-32 product derived from 4 BSD for larger VAX hardware. DIGITAL has added automatic installation procedures to make the system user installable, repackaged the technical documentation, and provided full support service offerings and UNIX* object sublicensing directly from DIGITAL.

Refer to SPD #28.04.xx when requesting further information on this product from your local DIGITAL sales office.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: \$1000 - \$3000

Contact: Consult your local DIGITAL sales office (see Introduction).

UniqTM UNIX* System V

Operating System: Uniq System V, UNIX* (System V)

Keywords: • Assemblers • Device drivers/handlers
• Networking • Source code control

This fully supported and enhanced version of Bell Laboratories' famous operating system has such advanced features as the VI full-screen editor, complete termcapping facilities, significantly improved performance versus System III in the VAX environment, full support of DIGITAL's new disk drives, interactive graphics facilities, source code control, RJE facilities to IBM hosts, VPM virtual protocol machine for network programming of the KMC-11, enhanced network support, and C and FORTRAN-77 compilers as well as compiler development tools.

Uniq supports UNIX* System V for most available peripherals. Uniq's CTAC (Customer Technical Assistance Center) offers instant access to the UNIX* support team. Consulting and technical training are available from a staff of Bell System-experienced consultants. A full catalog of UNIX* data bases and software is provided. Berkeley 4.1 BSD is also available.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$2750 - \$18,600

Contact: Uniq Sales Department
(312) 879-1008

UNIQU DIGITAL TECHNOLOGIES
28 S. Water Street
Batavia, IL 60510

UNITY Operating Systems

Operating System: UNITY

Keywords: • Compilers • Debugging • Disk utilities

VAX UNITY under VMS, derived from AT&T's System III, allows UNIX* to coexist with VMS and requires no special permissions to run. VAX UNITY under VMS features a full C compiler assembler and linkage editor, tools for constructing compilers and interpreters, formatting packages for common documents and for phototypesetters, and programs to check spelling, make tables, and construct bibliographies and mathematical equations. VAX UNITY under VMS also includes more than 100 utilities, such as graphics, electronic mail, computer-aided instruction, system accounting, and security access software.

UNITY for the PDP-11 allows even the largest utilities, such as FORTRAN-77, to be run on the low-end PDP-11/23. Included as part of the system are C and FORTRAN-77 compilers that produce compatible object code, an assembler and linkage editor, a powerful symbolic debugger, tools for constructing compilers and interpreters, a text editor, and typesetting software for correspondence-quality printers and for a phototypesetter. UNITY also provides enhanced device support and file system integrity, including automatic file repair and bad-block handling.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$1000 - \$16,000

Contact: Sales Department
(416) 922-1937

HUMAN COMPUTING RESOURCES CORP.
10 St. Mary Street, Fourth Floor
Toronto, Ontario M4Y 1P9
Canada

UNIVAC UTS400

Operating System: VMS

Keywords: • Networking • Telecommunications

The UNIVAC UTS400/U200/DCT1000 subsystem for UNIBUS-based computers includes a DIGITAL multiplexer from 8 to 16 channels, DMA data transfer, dual-host support, and full-screen buffer facility emulated on a VT100 terminal.

A version of this product is available for the PDP-11 computer.

Price: \$13,000

Contact: Mogens Poulsen
01-20 00 66
A/S DATALOG
Rygaards Alle 104
DK-2900 Hellerup
Denmark

UNIX* Systems Integration

Operating System: VMS

Keywords: • Development tools • Microprocessor development
• Networking

IDS is a single source for hardware, software, consulting, and support services. As a source licensee and distributor of AT&T's UNIX* operating system, IDS delivers professional tools for software development. With 4.2 BSD and System V UNIX,* a full range of development systems are configured with powerful state-of-the-art superminis such as Pyramid Technology's 90x and Convergent Technologies' MegaFrame™ and MiniFrame™ or traditional minicomputers from DIGITAL, such as the VAX and PDP-11 series. IDS also offers micro-based workstations such as the IBM PC/XT™ and Convergent AWS/IWS™ professional workstations. For the micros, IDS offers the new U-II, a real UNIX* port to the IBM PC/XT (System III with 4.1 BSD enhancements). Additionally, IDS PC CommSoft is available for communications software from the workstation to a VAX host. IDS bridges the market in high-end UNIX* applications for advanced research and development in the scientific, engineering, and commercial R&D fields.

* UNIX is a trademark of AT&T Bell Laboratories. MegaFrame,™ MiniFrame,™ AWS,™ and IWS™ are trademarks of Convergent Technologies. IBM PC/XT™ is a trademark of International Business Machines.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: P. J. Parsinen
(408) 986-1972

INTERNATIONAL DATA SERVICES, INC.
2231 Calle de Luna
Santa Clara, CA 95054

Usage Utilities for VAX/VMS

Operating System: VMS

Keywords: • Operations • Software utilities

This package contains the following programs:

- CD, a fast UNIX*-like chdir written in FORTRAN (no DCL)
- FINGER, a utility to finger a user in sysuaf; tells you more if you have OPER
- GMAIL, a general-purpose public bulletin board facility
- KILL, a revised version of an earlier submission, using CLDs and error definitions and having force image exit opt
- NETCOPY, a preprocessor for copy that uses getjpi to get a user name and inquires for the password separately (noecho)

- **NETUSERS**, a graphics program that, on a GIGI or a VT125, displays in a colored bar graph from the user and batch job counts on up to five DECnet nodes
- **NODESHOW**, a utility that allows users to look at other DECnet nodes without logging on to them
- **WHERE**, a utility that gives a 2-line summary of the local system load and location
- **FINGER**, a FORTRAN program to read the system authorization file and a user record by either UIC or user name

DECUS number VAX-95.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: \$5 - \$225

Contact: DECUS (see Introduction)

VAX-11/725/730 Diagnostic Set

Operating System: VMS

Keywords: • Diagnostics

This package of programs includes micro- and macrodiagnostic programs required to support Customer Runnable Diagnostics (CRDs). The microdiagnostic programs detect and isolate faults at the module level within the CPU, Floating Point Accelerator (FPA), Integrated Disk Controller (IDC), and memory. A microdiagnostic monitor and test overlays achieve module-level fault isolation. The macrodiagnostic programs detect and isolate faults within the VAX-11/725/730 and standard options. The Customer Runnable Diagnostics (CRD) feature is a simplified operator interface that sequentially runs the micro- and macrodiagnostic programs.

Refer to SPD #25.93.xx when requesting further information on this product from your local DIGITAL sales office.

Price: Available upon request

Contact: Consult your local DIGITAL sales office (see Introduction).

VAX-11/730 Microdiagnostics

Operating System: None required, VMS

Keywords: • Debugging • Diagnostics

Distribution medium: TU58 DECTape II cartridge.

This set of software programs allows users to maintain a VAX-11/730 Central Processor Unit (CPU). The programs isolate and detect faults at the module level within the CPU, Floating Point Accelerator (FPA), Integrated Disk Controller (IDC), and memory. A microdiagnostic monitor and a number of test overlays achieve module-level fault isolation.

Refer to SPD #25.92.xx when requesting further information on this product from your local DIGITAL sales office.

Price: Available upon request

Contact: Consult your local DIGITAL sales office (see Introduction).

VAX-11/750 Basic Diagnostic Set

Operating System: None required, VMS

Keywords: • Debugging • Diagnostics

Distribution media: 9-track 1600 bpi magnetic tape, TU58 DECTape II cartridge.

This package of programs allows users to independently maintain standard VAX-11/750 system hardware and peripheral devices. The package contains three components. The VAX Diagnostic Supervisor (VDS) supplies diagnostic and operator services (loading, starting, and control) as a stand-alone controller or as a layered program of VAX/VMS. Diagnostics are functional-level or repair-level programs that run under control of VDS. Functional-level tests run in stand-alone mode or with VAX/VMS. Repair-level programs run only in stand-alone mode. The Exerciser directs the supervisor to selected functional tests in a specified sequence and runs only under VAX/VMS.

Supporting programs included in this package are device drivers.

Refer to SPD #25.91.xx when requesting further information on this product from your local DIGITAL sales office.

Price: Available upon request

Contact: Consult your local DIGITAL sales office (see Introduction).

VAX-11/750 Diagnostic Set

Operating System: None required

Keywords: • Diagnostics

Distribution medium: TU58 DECTape II cartridge.

This package of programs allows users to maintain a VAX-11/750 Central Processor Unit (CPU) and standard VAX-11/750 peripheral devices. The set includes micro- and macrodiagnostic programs required to fully support diagnosis on VAX-11/750 systems.

The microdiagnostic programs detect and isolate faults at the micro level within the CPU and memory. The microdiagnostic monitor and a number of test overlays achieve module-level fault detection and isolation.

At the start of the microdiagnostic program, a ROM-based TU58 driver routine loads the microdiagnostic monitor from a TU58 tape cartridge into RAM memory located on the VAX-11/750 diagnostic module, LOOO6-YA. Then the program initialization routine begins. That routine controls program flow, initializes parameters, and invokes the TU58 driver routine to automatically load each of a series of overlays. The microdiagnostic tests are organized to sequentially test the data path hardware, CMI-translation buffer-cache, I-stream buffer, CMI,

and the memory controller and first two arrays. Detected faults result in error typeouts indicating the lowest level of modules and/or gate arrays to which the program can isolate the failure.

The macrodiagnostic programs provide fault detection and isolation within the VAX-11/750 CPU and standard options.

Refer to SPD #26.42.xx when requesting further information on this product from your local DIGITAL sales office.

Price: Available upon request

Contact: Consult your local DIGITAL sales office (see Introduction).

VAX-11/750 Microdiagnostics

Operating System: None required, VMS

Keywords: • Debugging • Diagnostics

Distribution medium: TU58 DECtape II cartridge.

This set of software programs is used with the VAX-11/750 Self-Maintenance Microdiagnostics Kit. The extensions of the basic VAX-11/750 diagnostics help maintain and repair the CPU and memory by detecting microlevel faults. VAX-11/750 Microdiagnostics contains the microdiagnostic monitor and test overlays that exercise a portion of the CPU or memory.

At the start of the microdiagnostic program, a ROM-based TU58 driver routine loads the microdiagnostic monitor from the TU58 tape cartridge into RAM memory located on the VAX-11/750 diagnostic module. Then the program initialization routine begins. That routine controls program flow, initializes parameters, and invokes the TU58 driver routine to automatically load each of a series of overlays. The microdiagnostic tests are organized sequentially from the data path hardware, to CMI-translation buffer-cache, to I-stream buffer, to CMI, and to the memory controller and arrays. Detected faults result in error messages that the program locates to the lowest level of modules and/or gate arrays.

Refer to SPD #25.61.xx when requesting further information on this product from your local DIGITAL sales office.

Price: Available upon request

Contact: Consult your local DIGITAL sales office (see Introduction).

VAX-11/780 Basic Diagnostic Set

Operating System: None required, VMS

Keywords: • Debugging • Diagnostics

Distribution media: 9-track 1600 bpi magnetic tape, RX01.

This package of programs supports customer-performed maintenance of standard VAX-11/780 system hardware and includes diagnostics to cover both the central processing unit options and all standard 11/780 peripherals.

The package contains three components. The VAX Diagnostic Supervisor (VDS) supplies diagnostic and operator services (loading, starting, and control) as a stand-alone controller or as a layered program of VAX/VMS. Diagnostics are functional-level or repair-level programs that run under control of VDS. Functional-level tests run in stand-alone mode or with VAX/VMS. Repair-level programs run only in stand-alone mode. The exerciser directs the supervisor to selected functional tests in a specified sequence and runs only under VAX/VMS.

Supporting programs included in this package are console, microcode, boots, and device drivers.

Refer to SPD #25.60.xx when requesting further information on this product from your local DIGITAL sales office.

Price: Available upon request

Contact: Consult your local DIGITAL sales office (see Introduction).

VAX-11/780 Diagnostic Set

Operating System: None required, VMS

Keywords: • Debugging • Diagnostics

Distribution media: 9-track 1600 bpi magnetic tape, RX01.

This package of programs allows users to maintain a VAX-11/780 Central Processor Unit (CPU) and standard VAX-11/780 peripheral devices. The set includes micro- and macrodiagnostic programs required to fully support diagnosis on VAX-11/780 systems.

The microdiagnostic programs detect and isolate faults at the module level within the CPU, floating point, and memory. The microdiagnostic monitor and a number of test overlays achieve module-level fault detection and isolation. Microdiagnostics are executable with the microdiagnostic monitor running in the VAX-11/780 LSI-11 console. The console disks provide storage for the microdiagnostic test overlays. Microdiagnostic tests are organized into a bootstrapping sequence for testing the console interface, data path hardware, SBI-Cache-Translation Buffer, I-stream Buffer, SBI, and Memory Controller, arrays, and Floating-Point Accelerator (FPA). All detected faults result in error typeouts that indicate the smallest set of modules to which the program can isolate a failure.

The macrodiagnostic programs provide fault detection and isolation within the VAX-11/780 CPU and standard options.

Refer to SPD #26.41.xx when requesting further information on this product from your local DIGITAL sales office.

Price: Available upon request

Contact: Consult your local DIGITAL sales office (see Introduction).

VAX-11/780 Diagnostics Extended

Operating System: None required, VMS

Keywords: • Data collection • Debugging

Distribution medium: RX01.

This set of programs allows a customer to enhance the self-maintenance of the system. The extensions to the standard diagnostics are called CPU microdiagnostics.

Refer to SPD #25.06.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$230

Contact: Consult your local DIGITAL sales office (see Introduction).

VAX-11/785 Diagnostic Set

Operating System: VMS

Keywords: • Debugging • Diagnostics

Distribution media: 9-track 1600 bpi magnetic tape, RX01.

This package of programs allows users to maintain a VAX-11/785 central processor unit (CPU) and standard VAX-11/785 peripheral devices. The set includes micro- and macrodiagnostic programs required to fully support diagnosis of a VAX-11/785 system.

The microdiagnostic programs detect and isolate faults at the module level in the CPU, floating point, and memory. The microdiagnostic monitor and a number of test overlays achieve module-level fault detection and isolation. Microdiagnostics are executable with the microdiagnostic monitor running in the VAX-11/785 LSI/11 console. The console disks provide storage for the microdiagnostic test overlays. Microdiagnostic tests are organized into a bootstrapping sequence for testing the console interface, data path hardware, SBI Cache-Translation Buffer, I-stream Buffer, SBI, and Memory Controller, arrays, and Floating-Point Accelerator (FPA). Detected faults result in error typeouts that indicate the smallest set of modules to which the program can isolate a failure.

The macrodiagnostic programs provide fault detection and isolation within the VAX-11/785 CPU and standard options.

Refer to SPD #26.81.xx when requesting further information on this product from your local DIGITAL sales office.

Price: Available upon request

Contact: Consult your local DIGITAL sales office (see Introduction).

VAX-11 RSX

Operating System: VMS

Keywords: • Development tools • Disk utilities • File transfer
• Software utilities

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Distribution media: 9-track 1600 bpi magnetic tape, RA60, RC25, RK07, RL02.

VAX-11 RSX, an RSX-11 operating systems emulator, enables PDP-11 users to develop programs for execution in the VAX/VMS compatibility mode, RSX-11M-PLUS, RSX-11M, RSX-11S, Micro/RSX, and P/OS environments. VAX-11 RSX also allows for the migration of many existing RSX-11 applications to VAX/VMS.

Refer to SPD #26.73.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$2000 - \$3000

Contact: Consult your local DIGITAL sales office (see Introduction).

VAX 8600 Diagnostic Set

Operating System: VMS

Keywords: • Debugging • Diagnostics

Distribution medium: RL02.

This package of programs allows users to maintain a VAX 8600 central processor unit (CPU) and standard VAX 8600 peripheral devices. The set includes micro- and macrodiagnostic programs required to fully support diagnosis of a VAX 8600 system.

The microdiagnostic programs detect and isolate faults at the module level in the CPU, floating point, and memory. The microdiagnostic monitor and a number of test overlays achieve module-level fault detection and isolation. Microdiagnostics are executable with the microdiagnostic monitor running in the VAX 8600 LSI/11 console. The console disks provide storage for the microdiagnostic test overlays. Microdiagnostic tests are organized into a bootstrapping sequence for testing the console interface, data path hardware, SBI-Cache-Translation Buffer, I-stream Buffer, SBI, and Memory Controller, arrays, and Floating-Point Accelerator (FPA). Detected faults result in error typeouts that indicate the smallest set of modules to which the program can isolate a failure.

The macrodiagnostic programs provide fault detection and isolation in the VAX 8600 CPU and standard options.

Refer to SPD #26.82.xx when requesting further information on this product from your local DIGITAL sales office.

Price: Available upon request

Contact: Consult your local DIGITAL sales office (see Introduction).

VAX Statistics

Operating System: VMS

Keywords: • Mapping • Operations • Statistics

This set of routines samples run-time values on a VAX over a long period. The values are written into a disk file from where they can be plotted. The sampled items are the number of interactive processes, the number of all processes, the disk I/O each minute, free memory, the response time for disk access and for DCL commands, and CPU activity.

Plots can be done from any time section of the disk file. The plot devices included are VT with retro, VERSATEC, HP2648, and HP7227. Different plot representations of the data are available. DECUS number VAX-113.

Price: \$5 - \$225

Contact: DECUS (see Introduction)

VAXACCTNG: A System Accounting Program

Operating System: VMS

Keywords: • Operations • Statistics

Memory required: 1000 peak virtual pages.

This program uses the VAX accounting file, accounting utility, sort-merge, and spawn to generate a percentage breakdown of CPU usage. The report breaks down use by account, user, interactive, batch, and subprocess. Accounting of a selected modem line and log-in failures are also reported. DECUS number VAX-81.

Restrictions: The program cannot be batched, due to spawn limitations.

Note: Due to the time format, the operating system is offset by 1 in lower versions.

Price: \$5 - \$225

Contact: DECUS (see Introduction)

VAXrecorder™

Operating System: VMS

Keywords: • Operations • Security • Simulation

Memory required: 3KB minimum.

This package allows a user to monitor the input and/or output streams of one or more interactive terminal sessions. VAXrecorder is a subset of the Performance Simulation System for the VAX, which allows a user to monitor, record, and then play back a terminal session on one or more pseudoterminals. VAXrecorder can be used to monitor both local and telephone terminal sessions. Highly sensitive applications can be monitored for unauthorized access. By monitoring the VMS system console, a complete log of system events, including anything the operator entered, is available. This feature is useful for monitoring operator interaction on production machines that need a record of events for problem determination.

Price: \$500 – \$895

Contact: Marie C. Murphy
(201) 798-6400

ADVANCED SYSTEMS CONCEPTS, INC.

22 Hudson Place
Hoboken, NJ 07030

VAXshadow™ Disk Mirroring System

Operating System: VMS

Keywords: • Disk utilities • Security

Distribution medium: 9-track 1600 bpi magnetic tape.

This facility allows a VAX system manager to create transparent disk shadow sets for maintaining redundant data bases. This facility is also known as disk mirroring.

A shadow set consists of a primary disk device and one or more shadows, or secondaries. User applications issue I/O operations to the primary disk, a Files-11 mounted device. Write-type operations are performed to volumes in the shadow set. Read-type operations are load balanced in the shadow set. This load balancing may offer the shadow-set user an increase in throughput, because read operations are not directed to a single volume.

VAXshadow, written in MACRO-32, offers automatic rollover on a volume failure in the shadow set. As long as a drive in the set is available for I/O operations, notification of the volume failure will not be passed back to the user program. Modifications to shadow-set status are logged and journaled to a disk file for audit purposes. When a hardware error is detected on a shadow-set device, it is removed from the shadow set.

Users can create and/or delete shadow sets and add, modify, or remove a volume in a shadow set with no loss of service or interruption. If a volume is to be added to a shadow set, VAXshadow offers an optimized on-line disk catch-up facility to ensure that all volumes in the shadow set reflect the same data.

VAXshadow is composed of a device driver, a shadow server, and a user-interface program invoked in the DCL command style, with qualifiers and parameters for program input. VAXshadow uses the normal VMS privileges for manipulating disk volumes.

Price: \$1000 – \$5000

Contact: Marie C. Murphy
(210) 798-6400

ADVANCED SYSTEMS CONCEPTS, INC.

22 Hudson Place
Hoboken, NJ 07030

VAXsim (System Integrity Monitor)

Operating System: VMS

Keywords: • Diagnostics • Operations

Distribution media: 9-track 1600 bpi magnetic tape, RX01, TU58 DECtape II cartridge.

VAXsim provides a real-time quantitative and qualitative synopsis of events reported through the VMS error-log mechanism. The comprehensive information accumulated augments VMS SHOW ERROR counters. Interactive operation yields displays that are convenient, timely, concise, and easy to interpret.

VAXsim enables system managers to troubleshoot their VAX systems quickly and easily. Capabilities include maintenance of a cumulative on-line summary of error information for immediate access; hierarchical graphics displays that highlight problem areas; remote-access capabilities for simultaneous monitoring of several systems on a single screen; and a state-of-the-art intelligent user interface for automatically correcting most common typographical errors.

Refer to SPD #26.62.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$2400 – \$4000

Contact: Consult your local DIGITAL sales office (see Introduction).

VAX/VMS Operating System

Operating System: VMS

Keywords: • Data base management • File management
• Programming tools • Real time

Distribution media: 9-track 1600 bpi magnetic tape, RA60, RC25, RL02, RX01.

The VAX/VMS operating system supports all VAX computers, in both time-sharing and production environments. Time-sharing users can work interactively with the system and can submit batch jobs. Any combination of processor-intensive, I/O-intensive, large-memory, and real-time jobs performs well on VAX/VMS. The system permits an absolute limit of 8192 concurrent processes. However, the amount of work supported at one time depends on the types of processing as well as on the physical memory and secondary storage. The practical limit, with moderate work loads, exceeds 100 concurrent users for a large-scale system.

VAX/VMS also provides text processing; a personal mail facility that permits a user to read, send, reply, forward, print, file, and edit messages at the terminal; a phone facility with networking capability (optional DECnet-VAX license is required for multinode operation); disk I/O to create and process sequential character files; and command-level programming to create special files called command procedures.

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Refer to SPD #25.01.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$10,000

Contact: Consult your local DIGITAL sales office (see Introduction).

VAXwatch™

Operating System: VMS

Keywords: • Operations • Security • Software utilities

Distribution media: 9-track 1600 bpi magnetic tape, cassette.

This program allows a user to inspect or modify any terminal session under VMS. VAXwatch will connect into the input and output streams of the "watched" terminal and then log all output into a disk file and/or another terminal.

VAXwatch can also be made to observe the terminal from which VAXwatch was started. That mode of operation is useful for security or operational purposes. For example, if the console was placed in "watch" mode, a perfect console listing of all system events could be captured.

VAXwatch can also be made to passively observe a specific terminal session and dynamically log events to a disk on command without interrupting the current process. The program monitors both local and dial-in terminal sessions and is compatible with DIGITAL layered products, such as TDMS and FMS.

Price: \$495

Contact: Marie C. Murphy
(201) 798-6400

ADVANCED SYSTEMS CONCEPTS, INC.
22 Hudson Place
Hoboken, NJ 07030

VENIX

Operating System: VENIX

Keywords: • Compilers • Debugging • Text management
• Word processing

VENIX, a licensed Bell UNIX* System V with enhancements, provides the tools needed to develop application software. Standard VENIX features include compatible file, device, and interprocess I/O; a tree-structured, hierarchical file system; a sophisticated command language; and a large assortment of compilers, editors, debuggers, and word processing capabilities.

VENIX is an expanded and improved UNIX* system, made to work more efficiently on small machines. Those expanded capabilities are real-time support, asynchronous I/O to handle high-speed data acquisition, shared data to allow many programs to access common memory,

semaphores to coordinate activities of multiple programs, and code mapping that expands the virtual address space to allow large programs to run on small machines.

VENIX will run with a variety of hardware devices, including many different disks, tapes, A/Ds, and serial and parallel interfaces. The device drivers can be easily configured into the system.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Customer Service

(617) 661-1230

VENTURCOM INC.

215 First Street

Cambridge, MA 02142

VIEWCOMP®

Operating System: VMS

Keywords: • Audit • Menu handlers • Security

This terminal session handler provides a simple, secure, and powerful way to control and monitor access from terminals to a VAX/VMS computer, regardless of the application, protocols, or conversational styles. VIEWCOMP begins from the instant the user switches on and sends a prompt to the computer. The system controls user access through user names and passwords. A user who logs in through VIEWCOMP never sees or uses VMS, keeping system overhead very low. In response to the user code and password, VIEWCOMP provides a personal menu, which is defined by the Menu Manager. Every menu selection is logged by VIEWCOMP for a full audit record of user actions. The log-on and log-off times are also recorded by VIEWCOMP.

The VIEWCOMP Menu Manager enables the system manager to establish a hierarchy of menus for individuals or groups of users. Users can access only functions that appear in their personal menus. That access-control mechanism prevents system functions from being invoked through the operating system, unless a user has access through VIEWCOMP to VMS.

VIEWCOMP uses the powerful MIMER data system.

Price: £3500 - £5000

Contact: N. Evans

44-(524) 734505

SAVANT ENTERPRISES

2 New Street

Carnforth, Lancashire LA5 9BX

England

Virtual DECTape System for RT-11 Version 4.0

Operating System: VMS

Keywords: • Device drivers/handlers • File transfer

Memory required: 32KB.

A serial interface to a host computer's terminal port provides file storage for an RT-11 system. The system includes a virtual terminal program for RT-11 that runs as a foreground job, a source patch to create the virtual DECTape handler from the TU58 DECTape handler source file DD.MAC, and a companion virtual DECTape file server program for a VAX/VMS host with source code in Pascal. RT-11 files are stored in a DECTape image file on the host computer's disk, which the RT-11 system accesses by means of the virtual DECTape handler communicating with the file server program that runs on the host. The file server program can also transfer VMS files into or out of the DECTape images, thereby providing file communication between the VMS and RT-11 systems. DECUS number 11-736.

Note: The device handler is written to RT-11 Version 4 specifications.

A version of this product is available for the PDP-11 computer.

Price: \$5 - \$225

Contact: DECUS (see Introduction)

VMSACTSYS

Operating System: VMS

Keywords: • Billing • Data base management • Operations
• Statistics

Distribution medium: 9-track 1600 bpi magnetic tape.

The VMS Resource Accounting and Chargeback System is a powerful system management tool that monitors and bills for system resources, software usage, and other incurred charges on a single VAX/VMS system or a network connected with DECnet. This menu-driven system includes as standard features four full levels of resource accounting — node, account, user name, and project. VMSACTSYS provides comprehensive utilization statistics, resource usage reports, sales reports, and chargeback billing on user-definable selections.

DIGITAL distributes this software product under license from Computer Information Systems of Massachusetts, Inc.

Refer to SPD #A3.81.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$4000

Contact: Consult your local DIGITAL sales office (see Introduction).

VRT-eleven**Operating System:** VMS**Keywords:** • Device drivers/handlers • File transfer

Distribution medium: 8" diskette.

VRT-eleven, an application migration executive, allows the user to run unmodified RT-11 programs on VAX/VMS systems, providing direct, transparent access to files in standard VMS directories. VMS and unmodified RT-11 programs can work with and share the same files. Many utilities are supplied with VRT, such as VRT's virtual-memory device handler and a logical disk handler.

This product was written and is owned by Hammond Software and has a 90-day warranty. Source codes and back-up copies are not available.

Price: \$1000**Contact:** Ewald Müssig
+ 49 551-21044

HAMMOND SOFTWARE
Stiegbreite 1
3400 Göttingen
West Germany

XSH (Menu Processor/User Interface)**Operating System:** ULTRIX-32, UNIX* (Berkeley, System III, System V), VMS**Keywords:** • Development tools • File management
• Menu handlers • Programming tools

The XSH menu processing system provides a menu-driven, shell-like interface between the user and the UNIX* operating system. XSH is tree-structured and recursive, with no restrictions on the number of menu levels. The menu processor allows the creation, deletion, and manipulation of UNIX* directories and files, provides for vertical market integration of other program modules, and can be installed as the log-in shell to assist the inexperienced UNIX* user.

Standard interfaces include hooks into all the XED office system modules, including the XED word processing system, the programmer's editor, forms generator, data entry and financial analysis, printer/spooler system, electronic mail, and document assembly. The menu processor also permits interactive UNIX* shell commands. Maximum installation flexibility and efficiency in a multiuser environment are provided.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

1432 Operating Systems

Price: Available upon request

Contact: Ted Ferguson
(818) 884-2000

COMPUTER METHODS, LTD.

P.O. Box 3938

Chatsworth, CA 91313

z-Board

Operating System: ULTRIX-32, UNIX* (Berkeley), VMS

Keywords: • Data conversion

The z-Board, developed by Virtual Microsystems Inc., is a hardware accelerator that works with THE BRIDGE.™ Users have access to high-speed microprocessors, without the problems associated with adding physical microcomputers. The z-Board product off-loads the main computer in both CPU cycles and memory.

Each z-Board has up to four Z80 microprocessors, 256K bytes of memory, and a bit-slice machine. For each board, the first four users on line have access to a dedicated micro, which significantly increases the execution speed of their programs. Other users are provided with THE BRIDGE simulator, queuing for the next available Z80.

Versions of the z-Board are provided for both the UNIBUS and the Q-bus. The Q-bus version may be purchased in one, two, three, or four Z80 configurations.

The z-Board substitutes for the "inner simulator" of THE BRIDGE, decreasing program execution time and reducing machine load. THE BRIDGE software, together with one or more z-Boards, gives users a complete micro environment without the drawbacks of physical floppies, cable incompatibility, and so forth but with all the advantages of centralized mass storage, high-speed printers, tape backup, and the sophisticated operating environments associated with DIGITAL minicomputers.

THE BRIDGE™ is a trademark of Virtual Microsystems, Inc.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Cheryl Pankratz
(714) 998-6041

MIDCOM CORP.

1940 N. Tustin Avenue, Suite 117

Orange, CA 92665

zplus-Board**Operating System:** VMS**Keywords:** • Data conversion

The zplus-Board, developed by Virtual Microsystems, Inc., is a CP/M coprocessor for the DIGITAL UNIBUS, supporting data acquisition, high-speed parallel data analysis, and CP/M Version 3.0. This new hardware accelerator for Virtual's CP/M BRIDGE™ System allows DIGITAL minicomputer users to take advantage of software written for CP/M micros. The zplus-Board supports control of external devices, specialized communications protocols, RAM disk-based processing, and CP/M Version 3.0. In contrast to Virtual's 4-cell z-Board, the zplus-Board offers two micro coprocessors, 512K bytes of RAM, and four serial ports each.

The zplus-Board offers high-level language support for process control, communication, real-time data acquisition, special device drivers (such as printers and plotters), and on-board RAM disk performance.

THE BRIDGE™ is a trademark of Virtual Microsystems, Inc.

A version of this product is available for the PDP-11 computer.

Price: \$5000

Contact: Cheryl Pankratz

(714) 998-6041

MIDCOM CORP.

1940 North Tustin Avenue, Suite 117

Orange, CA 92665

APPENDIX A

INTERVIEW QUESTIONS

1. How would you describe your relationship with your partner?
2. How did you meet your partner?
3. How long have you been together?
4. How often do you have sex?
5. How do you feel about your partner's sexual behavior?
6. How do you feel about your partner's sexual desire?
7. How do you feel about your partner's sexual satisfaction?
8. How do you feel about your partner's sexual communication?
9. How do you feel about your partner's sexual autonomy?
10. How do you feel about your partner's sexual responsibility?
11. How do you feel about your partner's sexual respect?
12. How do you feel about your partner's sexual honesty?
13. How do you feel about your partner's sexual loyalty?
14. How do you feel about your partner's sexual integrity?
15. How do you feel about your partner's sexual identity?
16. How do you feel about your partner's sexual expression?
17. How do you feel about your partner's sexual exploration?
18. How do you feel about your partner's sexual experimentation?
19. How do you feel about your partner's sexual risk-taking?
20. How do you feel about your partner's sexual decision-making?
21. How do you feel about your partner's sexual negotiation?
22. How do you feel about your partner's sexual consent?
23. How do you feel about your partner's sexual refusal?
24. How do you feel about your partner's sexual withdrawal?
25. How do you feel about your partner's sexual termination?
26. How do you feel about your partner's sexual completion?
27. How do you feel about your partner's sexual satisfaction?
28. How do you feel about your partner's sexual fulfillment?
29. How do you feel about your partner's sexual happiness?
30. How do you feel about your partner's sexual well-being?

Personal Computing



Camerique

CALC

Operating System: UNIX* (Berkeley), VMS

Keywords: • Calculation aids • Scientific

This desk calculator, written in C, transforms a standard VT100 keyboard into a powerful, easy-to-use scientific calculator. CALC features include log and trigonometric functions, exponents, and inverses. The program has a 10-memory display, a 100-entry stack, and a 10-entry stack display. Hard copy can be generated.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: \$50 – \$100

Contact: Rosalyn Snyder
(919) 851-1433

COMMUNICATION UNLIMITED
3603 Octavia Street
Raleigh, NC 27606

Cardware Disk Subsystem

Operating System: VMS

Keywords: • File management • Microprocessor development
• Office systems • Programming tools

This solution to the problem of gaining access to data and programs written on other personal computers attaches directly to Logcraft's QCP-11, QCP-11+, UCP-11, and HCP-11 Cardware units that allow for CP/M-80, CP/M-86, and PC/MS-DOS to be executed on DIGITAL's LSI-11, PDP-11, and VAX computers. The Disk Subsystem is available as a stand-alone 5¼" single-sided single drive, a stand-alone 5¼" double-sided single drive, or a stand-alone 8" industry-standard single-sided single drive. All Cardware Disk Subsystems come with their own controllers. The Cardware unit can read or write diskettes in a variety of supported formats, such as PC-DOS, MS-DOS, and CP/M. The Cardware Disk Subsystem uses a 1-track caching technique to substantially increase performance when accessing consecutive sectors.

A version of this product is available for the PDP-11 computer.

Price: \$995 – \$1495

Contact: Betty Pietrzyk
(603) 888-4448
LOGICRAFT, INC.
3 Graham Drive
Nashua, NH 03060

PCworks

Operating System: ULTRIX-32, UNIX* (Berkeley)

Keywords: • Communications • File transfer • Networking

PCworks is a "desk top" networking application that links IBM Personal Computers (or PC-compatible computers) to UNIX* computers. The PCworks package allows a PC to communicate with a variety of multiuser UNIX* systems to transfer data files, mail messages, or print reports. With the PCworks, the UNIX* system acts as a network manager, allowing PCs connected to the UNIX* system to communicate as well as to use the more powerful hardware and software on the UNIX* system.

PCworks consists of five software modules. The PCworks Menu System, Terminal Emulator, Configuration Manager, and the Mail/File Network Interface run on the PC. The PCworks Network Server runs on the UNIX* system. The PCs and the UNIX* system are connected, either directly or through modems, by way of RS232 ASYNCH communications lines.

The PCworks front end to the standard UNIX* mail system allows users to read, create, and send letters and to print or save correspondence on the PC. The PCworks file-transfer capability allows transfers between the PC and UNIX,* with optional conversion between UNIX* and MS/DOS file formats and use of the UNIX* system printer for PC-created reports. Users can predefine PCworks "keywords" to simplify the use of complex communication variables.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$495

Contact: Ray Norberte
(213) 598-7746

TOUCHSTONE SOFTWARE CORP.
909 Electric Avenue, Suite 207
Seal Beach, CA 90740

poly-XFR™ CP/M® Communications

Operating System: VMS

Keywords: • Data conversion • Diagnostics • File management
• File transfer

Distribution media: 9-track 800/1600 bpi magnetic tape, RL01, RL02, RX01, TU58 DECtape II cartridge.

This package, developed by Polygon Associates, Inc., St. Louis, MO, features binary/ASCII file transfers between DIGITAL's VT180 CP/M local system or a DECmate CP/M-80 local system and a host system. Host systems include CP/M-86/80 or MS™-DOS running poly-COM, DECmate CP/M-80, VT180 CP/M, RT-11, RSTS/E, RSX-11M, RSX-11M-PLUS, and VAX/VMS systems.

Time-out and error-detection features ensure the integrity of the transferred data. The software runs up to 9600 bps in a local environment and uses full-duplex modems for remote data transfer.

The poly-XFR CP/M Communications package can transfer, store, and retrieve files; use host peripherals; and act as a terminal to the host. With either system, the user can develop programs, transfer data between systems, or toggle the local printer on or off.

The CP/M Communications package includes software that runs on the host and on the local system, respectively. The local software is composed of a file-transfer program and a terminal emulator. The transfer program sends and receives files from the host. The terminal emulator converts the local VT180 or DECmate to a terminal, giving the user access to all the resources of the host computer. The host software interprets and executes the local program's file-transfer requests. The poly-XFR CP/M Communications command language is executed at the personal computer.

The package serves environments that use distributed development and/or personal computing systems and that need to share data, programs, or peripherals.

DIGITAL distributes this software under license from Polygon Associates, Inc.

Refer to SPD #A0.50.xx when requesting further information on this product from your local DIGITAL sales office.

poly-XFR™ is a trademark of Polygon Associates, Inc. CP/M® is a registered trademark of Digital Research, Inc. MS™-DOS is a trademark of Microsoft Corporation.

A version of this product is available for the PDP-11 computer.

Price: \$600 - \$850

Contact: Consult your local DIGITAL sales office (see Introduction).

PortaAPL™ — APL Language System

Operating System: ULTRIX-32, VMS

Keywords: • Interpreters • Programming tools • Translators

PortaAPL, developed by Portable Software, is a complete implementation of the APL programming language for mini- and personal computer systems. APL is an interactive programming language with many powerful array-processing features. APL is used in scientific programming, financial modeling, business data processing, and other application areas that require quick solutions to user problems.

PortaAPL contains all language features as given in the 1979 IBM/ACM APL standard, except for shared variables. Because it is written in the C programming language, PortaAPL can be run on many types of computer systems. Extensions in PortaAPL include a full-screen editor, an ASCII operating mode for non-APL users, and access to data files of the host computer systems. Assembly language functions can be called from APL functions, and IMPORT/EXPORT commands transfer APL workspaces among computer systems.

PortaAPL™ is a trademark of Portable Software.

Price: Available upon request

Contact: Joel Schacht
(617) 491-4180
OASYS
60 Aberdeen Avenue
Cambridge, MA 02138

UltraCalc®

Operating System: ULTRIX-32, ULTRIX-32m

Keywords: • Financial planning • Graphics • Spreadsheets

Memory required: 128KB minimum. Distribution media: 9-track magnetic tape, cartridge, diskette.

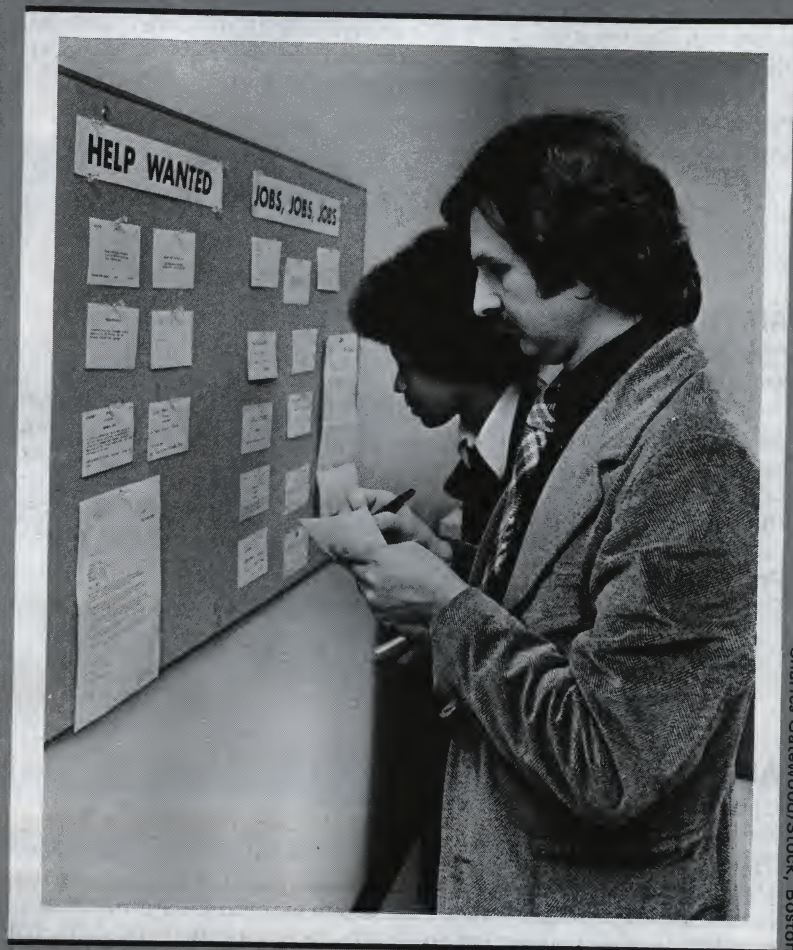
This powerful financial planning and modeling package, written in C, has a powerful command language interface, supports business graphics character sets and color, and allows virtually unlimited spreadsheet size. UltraCalc uses a virtual-memory architecture to store the worksheet. You can enter data in all the cells on your worksheet without running out of memory. You are limited to the amount of disk storage you have, but worksheets with thousands of rows and columns are facilitated.

A version of this product is available for the PDP-11 computer.

Price: \$395 - \$9795

Contact: Cary Petterborg
(801) 487-4534
OLYMPUS SOFTWARE, INC.
1733 South 1100 East
Salt Lake City, UT 84105

Personnel



Charles Gatewood/Stock, Boston

AIS Human Resources System

Operating System: VMS

Keywords: • Data base management • Employment
• Information management • Payroll

The AIS Human Resources System offers employee data bases — basic, extended, dependent, skills, property, position, and salary; position data bases — basic, skills, salary administration, and employee; same data bases as payroll uses; on-line entry and immediate update of all data bases; compliance with federal government regulations; salary administration; performance and evaluations; applicant tracking and matching; absence control; attrition analysis; skills inventory; benefits eligibility and statements; 83 standard inquiries/reports; a report writer; and user-defined fields, inquiries, and reports.

Price: Available upon request

Contact: Marketing Department
(415) 444-5954

ARGONAUT INFORMATION SYSTEMS, INC.
383 Grand Avenue
Oakland, CA 94610

AIS Payroll IV System

Operating System: VMS

Keywords: • Payroll • Taxes

This program features on-line timecard entry and update; employee setup and change and prepayment proof; unlimited pay and deduction calculation types; extensive security; U.S., Canadian, and local tax tables and reporting; ACH processing; multiple banks; handwritten checks; flexible check format; deposit advice; 50 user-defined fields; midperiod pay and deduction changes; job costing; and a report writer.

Price: Available upon request

Contact: Marketing Department
(415) 444-5954

ARGONAUT INFORMATION SYSTEMS, INC.
383 Grand Avenue
Oakland, CA 94610

APPGEN Payroll

Operating System: UNIX* (Berkeley)

Keywords: • Employment • Payroll • Report writer • Taxes

This system for calculating and printing payroll checks features complete payroll time entry, editing, and updating abilities for salaried, hourly, and contract personnel. The system maintains data-input accuracy by allowing transaction entry screens to be edited and corrected before posting. Plus, transaction entry screens match the formats of the original documents.

The system allows different pay periods for salaried and hourly employees. Plus, pay periods may range from daily to yearly.

Payroll includes virtually unlimited deductions/earning codes, including advance earned-income credit and temporary ad hoc deductions and earnings. The number of deductions for each employee is unlimited too. Deductions may be computed by percent or fixed-dollar amounts, with not-to-exceed limits, for any pay-period frequency. Flexible table-driven tax calculations handle virtually any computation/deduction method. The system also includes summarized data for local, state, and federal government reporting, including quarterly reports and W-2s.

The system accommodates manually written checks, multiple G/L distributions for each employee, and job cost distributions. The system also provides payroll distribution, payroll history, employee history and review, and overtime sick-pay reports. Audit trails include posting programs that automatically produce journals.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$600

Contact: Steve Thomas, Vice President, Marketing
(713) 974-2298 or (800) 231-0062

SOFTWARE EXPRESS

2925 Briarpark Boulevard, 7th Floor
Houston, TX 77042

APS (Applicant Placement System)

Operating System: VMS

Keywords: • Data base management • Employment

This time-sharing system helps employment agencies match applicants with jobs. APS interfaces with word processing systems for the preparation of resumes and mailing lists. APS maintains a data base of applicants, jobs, and clients and handles mass mailing for general-interest categories. The system provides free-form keyword searches and special handling for location preference. The system also enables multiple agencies with special programs to transfer data from one system to another.

A version of this product is available for the PDP-11 computer.

Price: \$500 - \$5000

Contact: Ed Kelleher, President
(803) 796-8858

MACRO, INC.

121 Professional Avenue
West Columbia, SC 29169

ARCHON: PAY

Operating System: VMS

Keywords: • Education • Payroll

The ARCHON: PAY (payroll) and personnel system modules are integrated with a data management system to automate many phases of a payroll operation for educational institutions and other nonprofit organizations. The system supports on-line payroll entry and retrieval, employee payroll data records organized by department or location, and generation of special reports. Variable pay periods and assorted user-defined deductions are built-in features. An interface exists to the ARCHON: FRS Financial Reporting System. The system produces, in addition to control reports, the checks and registers necessary for payroll records, prelists (transmittal sheets) for timecard and salary, and exception control. Other features are the management and personnel reporting facilities of the system.

A version of this product is available for the PDP-11 computer.

Price: \$7650

Contact: Ila Sunshine

(203) 728-6777

QUODATA CORP.

266 Pearl Street

Hartford, CT 06103

CDIS Payroll

Operating System: VMS

Keywords: • Manufacturing • Payroll

Memory required: 1MB.

CDIS Payroll, written in COBOL II, features simultaneous update to CDIS General Ledger and user-defined payroll deduction codes. Departments defined within the system are distinct from CDIS cost centers, and position and job codes are user defined. The package includes payroll booking to General Ledger by position, pay type, or employee; compensation time accruals capability; and an employee, master maintenance, and taxing subsystem. Other features include full payroll requirements reports, employee hold/select capabilities, computer-generated checks with void capability, handwritten check information processing, deposit capabilities, before- and after-tax deduction capabilities, on-line validation, flexible payroll periods, year-to-date activity inquiry, and accrued payroll forecasting.

Price: \$16,500

Contact: Roy E. Mann, President

(818) 991-4060

COMPUTER DATA INFORMATION SYSTEMS

31344 Via Colinas

Westlake, CA 91362-3912

CJ/PAYROLL™**Operating System:** VMS**Keywords:** • Payroll • Taxes

This on-line menu-driven data base-oriented payroll processing and reporting system provides automatic processing from time transactions through general ledger updating for variable pay periods. The system fully accommodates multiple companies, divisions, and departments as well as single entities. System customization is achieved through user-defined master files, data tables, and logic controls.

The system features multiple pay types and frequencies, along with user-defined table-driven earnings categories and voluntary deductions; automatic holiday pay; payroll and labor distribution; personnel reporting; tax and government reporting; automatic calculation of manual checks; check reconciliation; management reporting by employee last name and employee number; employee search and transfer by employee last name and employee number; and automatic data preparation for updating the general ledger. The system interfaces with Collier-Jackson's personnel resources system, CJ/PERSONNEL,™ to form a complete automated payroll/personnel system.

Price: \$16,000**Contact:** Laura Vaughan
(813) 872-9990COLLIER-JACKSON, INC.
3707 West Cherry Street
Tampa, FL 33607**CJ/PERSONNEL™****Operating System:** VMS**Keywords:** • Data base management • Employment
• Information management • Payroll

This on-line menu-driven data base-oriented personnel reporting system provides comprehensive analysis and control of all applicant personnel data. The system fully accommodates multiple companies, divisions, and departments as well as single entities. System customization is achieved through user-defined master files, data tables, logic controls, and user-specified report parameters.

The system features retention and reporting of salary and benefits administration, education information, job status data, on-line skills search, EEO and OSHA reporting, resume and application records, and career and attendance history. The system has full mass-change capability and automatic preparation of data for interfacing to the payroll system and interfaces with Collier-Jackson's payroll processing and reporting system, CJ/PAYROLL,™ to form a complete, automatic payroll/personnel system.

Price: \$20,000

Contact: Laura Vaughan
(813) 872-9990
COLLIER-JACKSON, INC.
3707 West Cherry Street
Tampa, FL 33607

CORTEX HRM (Human Resource Management System)

Operating System: VMS

Keywords: • Information management • Office systems
• Query facilities • Report writer

This on-line real-time information management system is designed to make personnel departments more effective. Invoking the report-writing function, a user may generate 40 standard reports that are available on demand through a screen or high-speed printer. A powerful query function provides customized data and ad hoc reports for complete analysis of a company's resources. Five modules comprise the system: Administrative, Placement-Application, Benefits and Pensions, Government Compliance, and Statistical Analysis.

Price: \$40,000

Contact: Lynn Hearl
(617) 894-7000
CORTEX CORP.
128 Roberts Road, Technology Center
Waltham, MA 02154

Cyborg On-Line Human Resource Management System

Operating System: VMS

Keywords: • Banking • Data base management • Employment
• Payroll

Written in ANSI COBOL, this integrated system uses a consolidated employee data base that contains all the information users need to perform payroll functions and to maintain a human resources management system. The reporting feature includes all the standard payroll registers and reports, as well as the human resource reports necessary to comply with the requirements of government agencies. The system also provides a high-level report writer language that enables the user to report on any information in the payroll/human resource data base.

The system can run in batch or on-line mode and contains nine modules: Basic Human Resource Recordkeeping, Benefits Administration, EEO/Affirmative Action, Applicant Tracking, Employee Health and Safety, Labor/Employee Relations, Manpower Planning, Position Control, and Time and Attendance. The system can be fully integrated with the Cyborg Payroll Administration System. Both are supported by a full year of free telephone assistance and a predetermined number of free training days. Both Human Resource Management and Payroll are industry independent.

Price: Available upon request

Contact: John Kluska

(312) 454-1865

CYBORG SYSTEMS, INC.

2 N. Riverside Plaza, 12th Floor

Chicago, IL 60606

DECjobmatch

Operating System: VMS

Keywords: • Employment • Recruiting

Distribution media: 9-track 1600 bpi magnetic tape, RA60, RK07, RL02.

This application for applicant tracking, job requisition processing, and job matching helps employers effectively administer their employment process by eliminating redundant data entry, reducing look-up time, and helping control direct-recruiting costs. The applicant tracking function enables the personnel department to maintain accurate, up-to-date records of job applicants; interview scheduling and employment offers. The job requisition processing function permits the personnel department to control requisition entry and content; to receive accurate, timely information about requisition status; and to track costs associated with advertising, agency fees, and relocation.

DECjobmatch can match open jobs with applicants or applicants with job openings or can match by user-selected criteria. DECjobmatch can produce reports for recruiters and managers and can extract information to produce form letters on a DIGITAL word processor.

In addition, DECjobmatch provides a function for employees to find jobs through the system. Employers can list open jobs so that employees can review them on line. Employees can enter their resumes, print them, and forward them to recruiters.

DECjobmatch incorporates an application management function that enables a non-data processing person to tailor any of the reference tables and system parameters to the company's business requirements. The Application Manager can set up users and can establish certain user-defined fields.

Additionally, DECjobmatch interfaces to ALL-IN-1 Office Menu, DIGITAL word processors (WPS-PLUS/VMS, DECtype, DECmate/WPS), and VAX DATATRIEVE.

Refer to SPD #26.89.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$9000 - \$27000

Contact: Consult your local DIGITAL sales office (see Introduction).

Employment Agency

Operating System: VMS

Keywords: • Accounting • Employment • Project management
• Word processing

This package generates payroll and invoices and handles employee scheduling, accounts receivable, accounts payable, general ledger, checks and balances, client account activity, resume searching, project tracking, complete file maintenance, and word and list processing. The package can be departmentalized and provides management summary reports and labor distribution analysis.

A version of this product is available for the PDP-11 computer.

Price: \$2000 - \$20,000

Contact: Andrew Yasenchak
(201) 231-9400

UNITRONIX DATA SYSTEMS, INC.

50 County Line Road
Somerville, NJ 08876

HR&OD (Human Resource & Organization Development)

Operating System: Independent

Keywords: • Data base management • Decision support
• Financial planning • Simulation

This interactive staff organization and human resource data base manager gives senior management options for organization consolidation and changing or establishing new departments. Budget simulations can test the impact of new hires, advancements, and percentage pay increases/decreases or terminations. The system provides for goal setting and goal attainment by skills. Raters can fill in accomplishments on the screen. Statistics on ratings by skills and by raters can be maintained for periodic management review. Data can be retrieved by promotion fitness, bonus eligibility, and E.E.O. compliance studies.

The organization and training aspect allows the user to establish skill needs for each department and assess the incumbent's qualifications. Training-need reports by cost centers or skills relate the assessments to attainments, future milestones with allied costs incurred to date, and expected future costs.

The staffing feature offers searches to fill upgrade vacancies, identify possible cross-training, spotlight persons working below capacity, and find persons in dead-end jobs who deserve special attention.

Compensation management can measure the percent of midpoint for each person by specified skill and pay ranges by department, comparable skills, or race/gender and comparable skills. Each report includes qualification data. Annual reviews are facilitated with record hard copies, specified by month, containing a person's compensation, performance, and qualification history.

Pay/benefits records are kept in a separate (interactive) file. Stored data for each employee is updated on an exception basis, with options for variable messages to employees before initiating the pay period. Check/stub data may be customized. Project accounting and general ledger data may be cross-updated to another mainframe.

One update updates related records or access prompts. The interactive records allow the user to retrieve administrative aids that contain names of persons due for records review, personal bonds renewal, or service recognition.

Software logic has been programmed and documented in compiled, multiuser BASIC. The 57 major programs are self-contained, using only a few operating system utilities. Other utilities, such as PROTECT, MOVE, LIST, and HELP, have been crafted into modules to ensure transportability between environments.

A version of this product is available for the PDP-11 computer.

Price: \$15,000 - \$225,000

Contact: O. H. Garceau
(801) 399-5332

H.R.D. SYSTEMS
319 Washington Boulevard
Ogden, UT 84404

Job Cost Accounting

Operating System: ULTRIX-32, UNIX* (Berkeley)

Keywords: • Cost accounting • Information management

The Job Cost Accounting system tracks costs for jobs by job number and activity and compares them to estimates. Employee, free-lance, invoices, and miscellaneous expenses are tracked. Employees are tracked by billing rates and hourly costs; free lance is tracked by activity. You compute the billable amount, the cost amount, and the profit. A user-specified markup is applied to invoices and miscellaneous expenses. The actual amounts are compared to estimate amounts. Profitability reports analyze jobs by client and by job type.

The system is written in C language and uses the public domain Ingres data base written by the University of California at Berkeley. Binary and source codes are available for UNIX* Berkeley 4.1 and 4.2. The source code is available for all others.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: \$4000

Contact: Fred Potthoff

(612) 941-9470

FARGO ELECTRONIC SERVICES, INC.

7150 Shady Oak Road

Eden Prairie, MN 55344

MANMAN/PAYROLL

Operating System: VMS

Keywords: • Employment • Payroll • Taxes

This interactive menu-driven product processes any size payroll, including those of large, multidivisional companies, and any pay frequencies in the same run. The 4-module — Employee Data, Pay Calculation and Checks, Deductions, and Taxes — allows unlimited deductions for each employee and calculates deductions as fixed rate, percentage, or rate \times hours. The product handles five pay frequencies and unlimited pay types. Federal, state, and local taxes are supported, and MANMAN/PAYROLL provides W-2s, 941-As, and state reports. EEOC reporting and statistics are provided. Pay is issued by check or through direct deposit.

Price: \$18,000

Contact: Carol Singh, Corporate Communications Coordinator
(415) 969-4442 ext. 4152

ASK COMPUTER SYSTEMS INC.
730 Distel Drive
Los Altos, CA 94022

MAPS/ISO

Operating System: VMS

Keywords: • Accounting • Investments

This comprehensive accounting and tracking system for stock option plans manages and tracks activity relating to the granting, exercising, canceling, and repricing of both incentive and nonqualified stock options. MAPS/ISO offers features designed to bring a company's stock option plan up to full compliance with federal regulations on Incentive Stock Option (ISO) accounting and reporting. Input data is validated on line to ensure proper grant or exercise of options and is available at any time for reporting and ad hoc inquiries.

Price: Available upon request

Contact: Shelley Swackhamer
(415) 856-1100

ROSS SYSTEMS, INC.
1860 Embarcadero Road
Palo Alto, CA 94303

MATCHUP: Assignment

Operating System: VMS

Keywords: • Employment • Pharmaceutical • Simulation
• Statistics

MATCHUP matches or assigns prospective job applicants' skills, years of experience, education, and so on to available jobs in a company, preferably a larger one. Matching is accomplished by using numerical ratings applied to attributes of the applicant. The output is a message of

excellent, good, possible, or no match at all, accompanied by a numerical score corresponding to the total matches between all attributes of an employee's personnel profile and the requirements of the available position. Again, numerical weights can be attached to any of the applicant's characteristics such as highest degree obtained, number of years of experience in commercial data processing or defense, minority group member, war veteran, number of years of real-time software development, or speaks French or German.

The price is a 1-time license fee.

A version of this product is available for the PDP-11 computer.

Price: \$5000

Contact: Jon Prescott

(619) 247-7219

J & S ASSOCIATES

13407 Quapaw Road

Apple Valley, CA 92307

PASS/ACCU-PAY

Operating System: VMS

Keywords: • Accounting • Data base management • Payroll
• Taxes

ACCU-PAY manages the tracking and paying of employees, providing service 24 hours a day 365 days a year, and covering the complexities involved with hourly and salaried personnel: different shift rates, premium pay, staggered hours, flextime, multiple cost centers, and more. The program performs job cost accounting, direct deposit, automatic deduction arrearage collection, automatic check reversal, check reconciliation, ACH, and up-to-date federal, state, and local tax deductions, 401K, and 125(S).

PASS creates an organized base of employee information, from salary, performance, and attendance data to skills, education, and accreditation records to help the user easily and accurately chart employee career growth. The program produces department position control reports that pinpoint assigned positions, the number of employees approved for each position, and approved hours for each pay period.

PASS allows management to monitor and control the performance of each department. Information can be developed to maximize an environment's flexibility with extensive divisions of labor and high interdependence of service. The program ensures compliance with affirmative action program analysis and OSHA/safety reporting requirements.

PASS and ACCU-PAY may be installed either separately or together as an integrated system sharing a single file and file-maintenance module. The systems are available in the traditional batch mode or may be installed as a true real-time on-line system.

Price: \$19,000 - \$75,000

Contact: Thomas Rafferty
(215) 828-4294

PERSONNEL DATA SYSTEMS, INC.
Whitemarsh Plaza, 15 E. Ridge Pike
Conshohocken, PA 19428

PAYROL-IMPRS Payroll P/R System

Operating System: VMS

Keywords: • Payroll • Taxes

PAYROL-IMPRS is a total payroll system that records pay period hours, pay, and taxes; allows for weekly, biweekly, semimonthly, and monthly pay frequencies and for hourly, salary, and salary with over-time pay types; provides for calculation of federal, state, and local taxes, tax exceptions, and up to 18 authorized deductions; provides for overrides at entry time of rate, salary, and department; has menu-driven entry and maintenance systems; provides for security passwords to control access, complete reporting and audit trail, and automatic master file backups; and performs extensive on-line editing and easy interactive reporting of all files.

A version of this product is available for the PDP-11 computer.

Price: \$3000

Contact: Elvin E. Smith or Forrest E. Weddle
(913) 782-8544
RUF CORP.
1533 E. Spruce
Olathe, KS 66061

Payroll

Operating System: VMS

Keywords: • Banking • Employment • Payroll • Taxes

The multiple-user Payroll system handles daily, weekly, biweekly, semimonthly, and monthly pay frequencies and exempt or nonexempt employees; 9 kinds of pay; any combination of tax-withholding profiles; 14 user-defined deduction codes; 4 types of accruals, as well as federal types of accruals; employee earnings records; complete month-to-date, quarter-to-date, and year-to-date history for each employee; multiple banks; and manually written or precalculated checks for a single employee.

The reporting features are a report writer facility, time sheet, payroll register, earnings report, tax summaries, W-2s, 941s, checks, and a deduction report.

A version of this product is available for the PDP-11 computer.

Price: \$3000 - \$6000

Contact: Linda Wingfield, Software Support Manager
(919) 766-0571

RESOURCE SYSTEMS CORP.

P.O. Box 1546

Clemmons, NC 27012

Payroll

Operating System: VMS

Keywords: • Payroll

This is a complete payroll package.

A version of this product is available for the PDP-11 computer.

Price: \$3500

Contact: Andrew Yasenchak
(201) 231-9400

UNITRONIX DATA SYSTEMS, INC.

50 County Line Road

Somerville, NJ 08876

Payroll (Canadian)

Operating System: VMS

Keywords: • Accounting • Payroll • Taxes

Distribution medium: 9-track magnetic tape.

This easy-to-operate system features interactive entry of personnel information, with field-to-field cross-edits; auto pay, with override for salaried employees; a 1-step procedure for validation, process payroll, and data base restore in case of errors; and year-end rollover, with last year's year-to-date data maintained on the current data base.

Earnings and deduction names, taxes, default earnings and deductions, and other parameters are table driven. Tables can be updated by the user on a security-level basis. This system has comprehensive user and operator documentation and is designed for operation by clerical-level personnel.

A version of this product is available for the PDP-11 computer.

Price: \$14,000

Contact: Robert Brown
(902) 429-3175

DYMAXION RESEARCH LTD.

Box 1053, Armdale Station

Halifax, Nova Scotia B3L 4L5

Canada

Payroll System

Operating System: VMS

Keywords: • Payroll • Report writer • Service industries
• Taxes

This system provides operational efficiency and reliability with maximum system flexibility and responsiveness. The system requires minimum maintenance and program intervention but still provides the total payroll function from check writing to form printing to report generating.

The system provides an employee master file; a restaurant payroll for tips and meals; hourly and salary payrolls, which can be run separately; weekly, biweekly, semimonthly, and monthly payrolls; the automatic calculation of gross pay, withholding, and deductions; entry of payroll attendance transactions; payroll attendance list printing; payroll and payroll check registers; computer-printed checks; an attendance distribution report; computer-printed 941-A and W-2 forms; departmental breakdown for labor analysis; multistate capability; and payroll tax deposit.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Bob Sprowls

(904) 434-2685

DIGITAL SYSTEMS, A DIV. OF UCCEL

114 E. Gregory Street

Pensacola, FL 32501

Payroll with Labor Distribution

Operating System: VMS

Keywords: • Payroll • Taxes

This totally interactive payroll/personnel management system for both hourly and salaried employees allows fast and accurate entry of time-record information, on-line retrieval and updating of personnel records, and immediate access to crucial labor cost information. Payroll permits up to 99 rates and as many as 20 voluntary deductions. All processing steps are initiated by English-language commands. Charge and cost rates can be assigned on labor grade code with an optional allocation of fringe over direct labor. Paychecks are easy to produce, and special bonus or 1-time payments are easily cut and tracked.

Payroll automatically provides full federal and state tax computations; validation of timesheet project codes; labor distribution reports by project, person, and organization; cumulative employee register; and deduction summaries.

Price: \$9000

Contact: Jenny McCoy
(703) 790-1700
L&L SOFTWARE, INC.
8200 Greensboro Drive, Suite 200
McLean, VA 22102

Placement Agency: Applicant Retrieval and Order/Billing Systems

Operating System: VMS

Keywords: • Billing • Employment • Payroll

This Applicant Retrieval system records data on each applicant who has been interviewed. With this data base in place, the retrieval system selects a range of applicants based on specific selection criteria — for example, permanent or temporary, job category, skill code, and industry background. The system provides both a summary and a detailed list of the applicants retrieved.

The Order/Billing system allows for orders of permanent and temporary applicants. Permanent orders are billed as a flat fee or a percentage; temporary orders are billed on time spent on site. All temporary billings are fed into the payroll system for weekly checks.

All billings interface automatically with the Accounts Receivable, Sales Analysis, and General Ledger systems.

A version of this product is available for the PDP-11 computer.

Price: \$5000 — \$10,000

Contact: Nigel Harris
(613) 829-8888

HARRIS COMPUTER SYSTEMS
16 Credit Union Way
Nepean, Ontario K2H 8R6
Canada

P/R (Payroll), MCBA, Inc.

Operating System: VMS

Keywords: • Payroll • Report writer

This payroll package serves hourly and salaried employees. The user can maintain the employee master file and can enter and edit payroll attendance transactions; general ledger account information by department; federal and state tax percents, limits, and withholding tax tables; and payroll adjustment transactions. The user can also perform check reconciliation, using the same files as A/P check reconciliation. Payroll, including gross wages, taxes, and deductions, can also be calculated. The Payroll package interfaces to two other MCBA packages; allows full printer spooling; supports seven terminal types, including the VT100 in both ANSI and VT52 modes; provides security; and supports multiple companies.

The Payroll package also prints the employee file printout; the alphabetical employee list; alphabetical employee mailing labels; employee time card labels; the payroll attendance edit list; payroll checks with choice of formats; payroll distribution summary; payroll check, savings bond, and union deduction registers; manual payroll transaction register; payroll to G/L distribution and payroll history reports; overtime, sick pay, job class/equal opportunity, state taxable wages, and city withholding tax reports; quarterly 941A forms; and yearly W-2 and 1099 forms.

A version of this product is available for the PDP-11 computer.

Price: \$2000 - \$3000

Contact: Sales Representative

(818) 957-2900

MCBA, INC.

2441 Honolulu Avenue

Montrose, CA 91020

PST (Payroll + State Tax)

Operating System: VMS

Keywords: • Government • Payroll • Taxes

With Plus State Tax, the end user may have employees working in multiple states during the same pay period and still generate only one payroll check for each employee, with correct deductions for each state withholding tax. This system prints one federal W-2 totaling the employee's earnings from all states for the year and also prints the appropriate number of state W-2 forms showing the employee's earnings from each state.

Plus State Tax will simultaneously support all 50 states, although at present only 40 states have a withholding tax. This multistate support is interfaced with the DIBS-11 Payroll Package and is completely transparent to the user. A 2-character printed state code before the deducted amount will appear on each employee's payroll check, indicating the states that withheld taxes. An Edit Report may be printed, showing the amount deducted from each employee's earnings, subtotaled by state.

A version of this product is available for the PDP-11 computer.

Price: \$1500 - \$2000

Contact: Nick Culbreth

(404) 256-3067

AMERICAN DIGITAL PRODUCTS CORP.

5775-B Glenridge Drive N.E., Suite 320

Atlanta, GA 30328

RealWorld Software: Payroll

Operating System: UNIX* (Berkeley, System III, System V)

Keywords: • Employment • Payroll

This system, developed by RealWorld, offers employee file maintenance and lists; handles both hourly and salary employees on daily, weekly, semimonthly, monthly, and quarterly pay frequencies, as well as special deductions and earnings; and prints the payroll worksheet to assist in gathering payroll input data, the register and the deductions register, and payroll checks and the check register. The system allows interactive entry and editing of attendance input data with edit list and register and automatically calculates the payroll.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$850 - \$1250

Contact: Vern Pang

(714) 978-1212

INFORMATION MANAGEMENT ASSOCIATES, INC.

1437 W. Palmyra

Orange, CA 92668

Software International Payroll/Personnel and PAY-LINE System

Operating System: VMS

Keywords: • Financial management • Payroll • Taxes

This software provides comprehensive on-line payroll processing and reporting and allows rapid and accurate response to a range of payroll and personnel requirements. The product gives managers efficient, flexible techniques for calculating wages, specifying deductions, producing paychecks, and performing labor distribution. The user can establish multiple payrolls, each with its own set of processing options, and can process different companies, divisions, departments, or groups as well as any combination of pay frequencies in the same run.

Price: Available upon request

Contact: Gary M. Kuba

(617) 937-8500

INTERACTIVE SYSTEMS, INC.

600 Suffolk Street

Lowell, MA 01854

SP Human Resources

Operating System: VMS

Keywords: • Employment • Report writer

This system allows the personnel manager to enter and report a wide variety of employee-related information to better manage the human resources of the company. The system can be run either with a shared common employee file with the payroll system or as a stand-alone HR system. More than 50 classifications of employee information can be entered, including dependents, property assigned, military status, maiden name, citizenship, education, EEOC, and blood type. Absence/leave/illness information is maintained for each employee. Government compliance reporting includes EEOC reports, OSHA reporting, and alien reporting.

Positions, including job descriptions, are defined with required and/or optional education and skills. Employee and applicant skills/education can be searched and matched to open positions. Performance and salary review administration can be monitored for each employee and reported on by supervisor. Wage and salary information can be compared by department in your company or to external salary surveys to monitor fairness and competitiveness.

Personnel requisitions can be entered and reported on by department or job classification. Applicant processing includes recording applicant skills and education and matching those to open requisitions. The status, including disposition, of all applicants is available.

Benefit administration allows the user to define benefit carriers, plans and coverages, eligibility, and employee contributions.

Price: \$10,500 – \$27,000

Contact: Robert Murray
(313) 971-5377

SOFTWARE PLUS
2020 Hogback Road
Ann Arbor, MI 48104

TBS Time Accounting for Professionals

Operating System: VMS

Keywords: • Billing • Report writer

The TBS Time Accounting System, designed for a wide variety of professional-service organizations, has great flexibility in the type and manner of transaction entry. A large number of management-level reports are available for analysis of productivity and revenue sources. An interface to the TBS General Ledger system is optional.

A version of this product is available for the PDP-11 computer.

Price: \$995 – \$2500

Contact: Chuck Tebbetts
(818) 242-7981

THETA BUSINESS SYSTEMS
1110 Sonora Avenue, Suite 106
Glendale, CA 91201

TEMPUS-11 Time and Attendance System

Operating System: VMS

Keywords: • Data collection • Forms management
• Project management • Scheduling

Distribution media: magnetic tape, RL02.

TEMPUS-11 is a hardware and software system that helps manage human resources by continuously monitoring individual personnel schedules with recorded attendance. The system uses a time-clock terminal, TMP-21/TK, produced by ATS, to record arrival and departure of personnel at the workplace. Up to 99 work schedules can be defined to cover unique work schedules. Rotating shifts, flexitime, part-time, or job-sharing time structures are all accommodated. The menu-driven displays guide personnel managers in use of the system. A real-time attendance status display is immediately available with a single key-stroke. Individual attendance records are continuously updated. Management summaries by cost center or department are readily compiled. Overtime can be automatically approved within specified parameters or held for individual review. Error conditions are listed for resolution by the supervisor. Monthly reports reflecting hours scheduled versus hours worked, sickness, absence, attendance by day, overtime, and master file changes are all available to provide personnel managers with information about the human resources, the most important asset in any organization. The system can interface to large mainframes to provide input to payroll and accounting systems or can generate floppy disks or magnetic tapes for information transfer. The time attendance terminal is equipped with CMOS memory and battery backup to ensure continuous performance and capture of data.

A version of this product is available for the PDP-11 computer.

Price: \$4600 - \$19,450

Contact: Robert L. Hirtle, Office Manager
(904) 433-7578

ATS DATA PROCESSING, INC.
1101 North 9th Avenue
Pensacola, FL 32501

TIMANA-IMPRS Time-Analysis System

Operating System: VMS

Keywords: • Accounting • Billing • File management

TIMANA-IMPRS handles manpower reporting and invoicing, client analysis reports, and journals. The system provides a complete record of all employee hours, automatically calculates for chargeable hours, allows separate rates for each employee for different customers, has menu-driven file maintenance, performs extensive on-line editing, does not allow duplicates to be entered, allows instant access to employee records, allows separate rates for each employee for special jobs, provides automatic master file backups, allows for constant

1460 Personnel

monthly charges to be established, prints client invoices and labels, handles manual invoices, has proof reporting available, and allows all master files to be interactively reported.

A version of this product is available for the PDP-11 computer.

Price: \$3000

Contact: Elvin E. Smith or Forrest E. Weddle

(913) 782-8544

RUF CORP.

1533 E. Spruce

Olathe, KS 66061

Real Estate



Robert Pyle

AESOP (Aggregate Exception System for Mortgage Portfolios)

Operating System: VMS

Keywords: • Banking • Financial analysis
• Property management • Report writer

Distribution media: RL02, RK07.

AESOP serves the master servicer or trustee of a portfolio of single-family mortgages. The system reports to the investor or the source of mortgage funds by reconciling the direct servicer's reports and remittances. The system is designed for both commercial application and public housing agencies.

On a monthly basis, the only input to the system consists of exceptions to the normal monthly payment, such as liquidations, curtailments, prepayments, delinquencies, or principal adjustments. If the mortgagor makes the normal scheduled payment, no input is required. User-friendly screens and prompts guide the user in operating the system.

Reconciling and balancing are done before individual mortgage records are posted. Therefore, discrepancies are resolved before files are updated.

The system produces monthly reconciliation reports and forecasts for the next month, based on the activities of the month just closed. A mortgage trial balance is generated, as is a forecast trial balance.

The user decides on the elements to be stored for each mortgage. An integral report writer enables the user to retrieve any stored data and to format ad hoc reports.

A version of this product is available for the PDP-11 computer.

Price: \$35,000

Contact: Ralph S. Trigg, Jr.
(505) 842-1247

AUTOMATED OFFICE SYSTEMS, INC.
P.O. Box 100
Albuquerque, NM 87103

Commercial Property Management

Operating System: VMS

Keywords: • Accounting • Accounts receivable • Billing
• Property management

This system provides instant recall of current and historical data for video display or printing and gives the commercial property manager complete and effective financial control. Lease, rent, tax refund, accounts receivable, and sales reports are available and can be displayed or printed for faster, paper-free review. An interrelationship of data files storing information on properties, tenants, leases, billings, and sales forms the core of this application. The master control record

permits a user to tailor this system to take advantage of specific features. General ledger interface, percent rent calculation, invoice history, tax calculation, tax escalation, and common area calculations can be disabled if they are not required. The Commercial Property Management system features property information, tenant and lease information, lease abstract details, invoicing, accrued charges, tax escalation, common-area distribution, adjustments, and deposits and prepaid rent.

A version of this product is available for the PDP-11 computer.

Price: \$3000 - \$15,000

Contact: Tom Muskiluke
(519) 893-4200

DIGITAL BUSINESS COMPUTERS
133 Manitou Drive
Kitchener, Ontario N2C 1L4
Canada

Commercial Tenant Accounting

Operating System: VMS

Keywords: • Property management

Distribution media: disk, magnetic tape.

This interactive receivables system can support 950 properties and 9500 rental units for properties and can be used for shopping centers, office buildings, warehouses, and so on. Concurrent cash and accrual accounting is provided in a system that manages property and tenants, including tenant inquiry, tenant master file, rent roll (automatic update of tenant receivables), current and historical tenant ledgers, monthly statements, second notices, special billings, receivables posting by classifications or by priority, late notices and charges, project management reports, and more. When combined with Landmark's retail sales and percentage rents, Commercial Tenant Accounting provides the most comprehensive system available to users. This multi-user on-line system is integrated with other Landmark systems.

Price: Available upon request

Contact: Carol Ryan, Marketing Director
(201) 722-5100

LANDMARK SOFTWARE SYSTEMS, INC.
155 W. Main Street
Somerville, NJ 08876

DPS/11 Analysis and Finance Programs

Operating System: VMS

Keywords: • Banking • Decision support • Financial analysis
• Property management

This comprehensive menu-driven real estate applications library of investment analysis, tax analysis, and loan repayment and other related programs serves the commercial/investment real estate broker, appraiser, accountant, attorney, developer, and investment analyst. This software is based on NRE's industry-proven investment analysis programming skill. Functions include a Constant P&I Payment Loan Schedule, Constant Principal Payment Loan Schedule, Graduated (by %) P&I Payment Loan Schedule, Graduated (by \$) P&I Payment Loan Schedule, Graduated (by %) Interest Rate Loan Schedule, Internal Rate of Return and Financial Management Rate of Return Computations, ACRS Cost Recovery Schedule, Sale Proceeds After Taxes, Individual Tax Analysis, Installment Sale Year Analysis, Carry-Back Installment Loan Analysis, Carry-Back Wraparound Loan Analysis, Funded Installment Loan Analysis, Funded Wraparound Loan Analysis, Investment Base and Acquisition Basis Computations, Comparative Tax Analysis, Federal Tax Schedules, Income Property Factors, Development Site Factors, Investment Value Computations, Own/Lease Analyst, Transaction Structuring, Transaction Basis Adjustment, Acquisition Analysis, Sale of Personal Residence, and Net Present Value Computations programs.

Documentation includes an installation and instruction manual with detailed program descriptions, sample program runs, and sample printouts.

This product is supported nationally (U.S.A.). The license fee includes the first year of software maintenance, updates, enhancements, and support.

Running this product requires the DPS/99 Systems Interface software module (\$695 - \$995).

A version of this product is available for the PDP-11 computer.

Price: \$1895 - \$2295

Contact: James L. Lawson, Senior Analyst
(305) 647-6739

NATIONAL REAL ESTATE EXCHANGE, INC.
NRE Systems Division, P.O. Box 475
Maitland, FL 32751

DPS/12 SUPRCOSH Investment Cash Flow Analysis

Operating System: VMS

Keywords: • Decision support • Financial analysis
• Investments • Taxes

This sophisticated menu-driven, screen-documented investment cash-flow analysis software package was developed by commercial/investment real estate professionals. Based on projected pretax income, SUPRCOSH computes after-tax cash flows and yields for holding periods up to 30 years, up to 20 loans, separately definable incomes

and expenses, and up to 20 depreciation/cost recovery items. Tax computations reflect IRS tax rate schedules and are based on the investor's reporting method and taxable income.

This product includes programs that allow graphing of any two (of more than 125) categories of analysis results for comparison and displays the graphs on video screen and/or hard copy. What-if situations can be analyzed through a versatile editing feature that enables the user to change any input item(s) and store input for later analysis. Results are displayed and printed in one of three user-selected formats and may be printed in 80- or 132-column-wide reports.

Documentation includes an installation and instruction manual with detailed program descriptions, sample program runs, and sample printouts.

This product is supported nationally (U.S.A.). The license fee includes the first year of software maintenance, updates, enhancements, and support.

Running this product requires the DPS/99 Systems Interface software module (\$695 - \$995).

A version of this product is available for the PDP-11 computer.

Price: \$1895 - \$2295

Contact: James L. Lawson, Senior Analyst
(305) 647-6739

NATIONAL REAL ESTATE EXCHANGE, INC.
NRE Systems Division, P.O. Box 475
Maitland, FL 32751

DWC Land Parcel Data Base System

Operating System: VMS

Keywords: • Data base management • Mapping

Originally designed for a governmental/engineering mapping project, this sophisticated system includes tape-loading programs, data entry functions, on-line changes and inquiries, a flexible report generator, and a property index card program. The data base can be accessed by account number or map number, owner's name, and owner's tax ID number. Pertinent data includes township number, area and quarter sections, parcel number, multiple deed and plat book entries, lot dimensions, acreage, and various district numbers and codes (tax, city codes, addition codes, and so on). Lot and block numbers, subdivision name, township, section and range, parcel address, owner name and address, and a variable-length field for a complete land description are also included. Both split and consolidated properties can be tracked.

A version of this product is available for the PDP-11 computer.

Price: \$5000 - \$10,000

Contact: Barbara Dotson or Cheryl Hammelman
(606) 253-3183
DWC COMPUTER SOLUTIONS, INC.
1642 N. Broadway
Lexington, KY 40505

ILSA (Installment Loan Service Accounting)

Operating System: VMS

Keywords: • Accounting • Banking • Property management

This easy-to-use system services installment collection accounts pertaining to notes and trust deeds and land sales contracts. The program is designed for installment collection, the collections department in financial institutions, escrow and title companies, mortgage companies, and large real estate firms and developers.

ILSA features on-line display of current account status information, payment history, and disbursement records; amortization of payments with monthly, quarterly, semiannual, and annual payment schedules; disbursements to payees, containing complete payment amortization records; and an impound account capability and the handling of underlying obligations.

ILSA produces daily accounting reports, payment coupons, year-end statements, beneficiary and demand statements, late-notice letters, and other supplemental reports. Expansion is limited only by the hardware configuration. No limitations are imposed by the software as to the maximum number of account records, payees for an account, or retention of historical records.

A version of this product is available for the PDP-11 computer.

Price: \$5000 - \$28,000

Contact: Richard Brunet
(702) 786-2911
DATA CONCEPTS INTERNATIONAL, INC.
P.O. Box 20502
Reno, NV 89515

Limited Partnership Investment System

Operating System: VMS

Keywords: • Financial analysis • Forecasting • Investments
• Taxes

This comprehensive package performs record keeping and tax processing for limited partnerships with an emphasis on real estate. The system stores detailed information on up to 999,999 investors and 99,999 partnerships; tracks partnership interests for limited and general partners with original, adjusted, and fair market value capitals; allows multiple assets for each partnership and handles tiered partnerships; allows termination and replacement of partners, transfers of interest,

and joint tenants; retains complete investor history; produces cash flow distribution with check writing; generates federal and state 1065s with supplementary schedules and K-1s; interfaces to MASS-11 word processing; includes an investment receipt system; projects ordinary and capital gains/losses, tax preference, and more; and generates comprehensive reports on major data files, mailing labels by numerous criteria, complete audit trails, partnership by partner report, investor affiliation report, schedule M reconciliation, termination projections, as well as several additional reports.

Our system is interactive, menu driven, user friendly, can be modified to fit your particular needs, is written in VAX BASIC, uses RMS files, and offers optional source code.

Price: \$35,000 – \$45,000

Contact: Ron Krause

(312) 850-7700

INLAND COMPUTER SERVICES

2100 Clearwater

Oak Brook, IL 60521

Mortgage

Operating System: VMS

Keywords: • Credit • Financial management
• Property management

Mortgage calculates any item missing from this list of four: term, principal, payment, interest rate. The system then produces an amortization table showing the principal balance, principal payment, and interest payment for each month. Also, totals are shown for each full or partial year. The table can start at any month in the year.

Price: \$150

Contact: Michael L. Bussler

(412) 661-2100

ALGOR INTERACTIVE SYSTEMS, INC.

Essex House, Suite L1, Essex Square

Pittsburgh, PA 15206

PMS-11 (Property Management)

Operating System: VMS

Keywords: • Accounts receivable • General ledger
• Property management

Distribution media: RL01, RL02, RX01.

This program provides for both commercial and residential requirements. Tenant billing and accounts receivable age analysis are produced. Property and tenant master files are maintained to control lease expirations, scheduled rent increases, insurance expiration, and so

forth. The system interfaces with Franklen's CPA-11, General Ledger/Financial Reporting System, to produce user-definable financial statements and consolidations.

A version of this product is available for the PDP-11 computer.

Price: \$1500 - \$2100

Contact: Frank J. O'Kane, President
(213) 441-3123

FRANKLEN COMPUTER SYSTEMS, INC.

715 Fremont Avenue

South Pasadena, CA 91030

PMS (Property Management System)

Operating System: VMS

Keywords: • Financial analysis • Information management
• Property management

PMS is a comprehensive, easy-to-operate, automated management tool for large or small property managers. PMS can be modified to meet your needs. The program will update and retrieve property lease information by complex, building, and unit; track rent receipts and delinquent rent payments; maintain tenant information files with deposit amounts, lease terms, and demographic data; prepare lease-status reports indicating leased versus vacant properties and dates of vacancies; provide expiration reports showing dates of expiring leases and lease amounts; prepare estimated lease-revenue reports by complex, building, and unit; interact with the word processing system for correspondence with tenants and reporting to investors; and interact with the spreadsheet system for financial planning purposes.

A version of this product is available for the PDP-11 computer.

Price: \$1500 - \$20,000

Contact: William R. Paschal, Jr.
(405) 843-7323

DATATEK CORP.

818 N.W. 63rd

Oklahoma City, OK 73116

Project Inventory Control for Time-Shared Resorts

Operating System: VMS

Keywords: • Accounting • Inventory • Property management
• Sales analysis

This program for the time-share developer allows easy entry of the details of a sales transaction. The program performs calculations and updates the files associated with a sale. The required entries are automatically made to a field-proven, powerful accounting system. A series of time-share-related reports is immediately available, reflecting the changes from a pending sale through to the "front-desk" reports.

Input the details of a sales transaction, and the following information becomes available: reports of pending unclosed sales and unsold inventory (with prices); a cash forecast from pending sales, sorted by closing dates; a history of cash versus financed transactions; discounts given as a percent of list prices; sales reports showing discounts, generation, salesperson, marketing costs, owner name, and other details; monthly and year-to-date sales totals showing unit, intervals, and owner; total sales by marketing sources; inventory availability automatically checked; and automatic updating of accounting files (G/L, accounts receivable entries such as sales, discounts, commissions, dues, and notes receivable).

Owners' files are created to be used with word processing for automatic billings, mailings, and so forth. Remote terminals at sales sites can be used to update information daily. The program also provides security levels, dramatically reduces bookkeeping preparation, and provides up-to-the-minute detail reports for increased control. The program interfaces with the MCBA accounting packages.

A version of this product is available for the PDP-11 computer.

Price: \$6500 - \$9000

Contact: Tim Stephenson, Vice President, Marketing
(303) 232-9417

RESORT COMPUTER CORP.
2801 Youngfield Street, Suite 301
Golden, CO 80401

Property Management (Rental)

Operating System: VMS

Keywords: • Accounting • Financial analysis
• Property management • Scheduling

This system allows the property manager to control and report on the financial aspect of the buildings managed, to keep a full record of all units within buildings within projects, and to generate financial statements for individual buildings or projects, as well as for the consolidated operation. New buildings can easily be added to the system.

The system handles the automatic chargeup of monthly charges, which can include rent, condominium fees, parking, cable charges, and so on for all occupied units. The system keeps track of lease-renewal dates for the generation of renewal letters and will automatically apply percentage increases as permitted by law for lease renewal. Delinquency letters are generated, based on severity of delinquency. Vacancy lists can be printed on request, and unit expiry lists can be printed for any specified date. Full tenant information and history are maintained for all active tenants. Up to three previous tenants and one future tenant can be associated with any unit, permitting collection of debts from previous tenants to be handled easily.

The integrated accounts payable system allows cash disbursements to be distributed appropriately to one or more of the buildings or projects as determined by the property manager. An automatic check-generation facility is also available. A full set of financial statements is provided, including Detailed and Summary Trial Balances, Income Statement, and Balance Sheet.

A version of this product is available for the PDP-11 computer.

Price: \$5000 - \$10,000

Contact: Nigel Harris
(613) 829-8888

HARRIS COMPUTER SYSTEMS
16 Credit Union Way
Nepean, Ontario K2H 8R6
Canada

Property Management System

Operating System: VMS

Keywords: • Accounting • Financial analysis • General ledger
• Property management

This system is comprehensive, interactive, menu driven, user friendly, and flexible and can be customized; source code is available. PMS is written in VAX BASIC and uses RMS files. The system is fully integrated with accounts payable and general ledger, with check-writing capabilities; generates financial statements with budget comparisons on a unit basis and tenant invoices; tracks rent receipts, including late charges, damages, and miscellaneous income; has an automatic month-end closing procedure that includes charging of rents and posting of accounts receivables to the general ledger; allows information on past tenants and applications; stores data by complex, unit, and tenant; calculates security deposit interest and automatically writes accounts payable; has an automatic payable generation for recurring payments; and produces late lists, vacancy lists, lease expiration, month-to-date and year-to-date cash-flow reports, 13-month rollovers, tenant labels, and several other reports.

Price: \$20,000 - \$30,000

Contact: Ron Krause
(312) 850-7700

INLAND COMPUTER SERVICES
2100 Clearwater
Oak Brook, IL 60521

Property Manager

Operating System: VMS

Keywords: • Accounting • General ledger
• Property management

This comprehensive system for commercial and residential property management automates major property management functions, giving managers greater insight into profit/loss factors and more effective operations. Property Manager supports tenant-related functions, such as rent roll, tenant profile, tracking of move-ins/move-outs, and vacancy and delinquency reporting; accounts payable, including a check-writing and cash-disbursements capability; accounts receivable, tailored toward rental collection; general ledger; financial reporting; and maintenance of building-characteristics data. QED Computer Systems, Inc., developed Property Manager in conjunction with a California-based investment and property management firm, Investment Concepts, Inc.

Price: \$5795 - \$14,585

Contact: Thomas E. Tahan
(213) 556-8620

QED COMPUTER SYSTEMS, INC.
2210 Wilshire Boulevard, Suite 195
Santa Monica, CA 90403

Real Estate Information System

Operating System: ULTRIX-32

Keywords: • Data base management • Property management
• Query facilities • Source code control

Distribution media: RL02, RX50.

This easy-to-use state-of-the-art information system is available in residential and commercial modules. The system features master file updates and reports for residential and commercial properties, update files for daily logs without tampering with the master files, comparable files to keep sold properties separately for future use in property assessments and negotiations, and flexible query facilities for fast recall of properties satisfying any list of criteria.

This software package is easy to modify with its powerful data base manager, when the user buys the source code option. Run-time-only modules are also available. The package comes with installation, three hours of intensive training, six months of free phone support, and more.

A version of this product is available for the PDP-11 computer.

Price: \$2000 - \$6000

Contact: Michael A. Sce
(718) 377-6998

SOFTWARE CONSULTING ENTERPRISES, INC.
1360 Ocean Parkway, Apt. 3H
Brooklyn, NY 11230

Residential Property Management

Operating System: VMS

Keywords: • Accounting • Accounts receivable • Billing
• Property management

This easy-to-use series of interactive programs, designed for building managers demanding complete financial control, stores instant-access information about projects, buildings, units, and leases, as well as user-defined parameters, such as sundry adjustments, unit sizes, and miscellaneous charges and deposits. Used in combination with transaction postings (rental posting, cash receipts, refunds, and so on), revenue summary, control, lease status, rent roll, and arrears reports are available. The Residential Property Management system features multiple-unit types, multiple leases, master parameter flexibility, transaction processing, history transactions, automatic rent calculation, notices, general ledger, deposit slips, rental increases, vacancy inquiry, sublets, and NSF checks.

A version of this product is available for the PDP-11 computer.

Price: \$3000 - \$15,000

Contact: Tom Muskiluke
(519) 893-4200

DIGITAL BUSINESS COMPUTERS

133 Manitou Drive
Kitchener, Ontario N2C 1L4
Canada

Residential Tenant Accounting

Operating System: VMS

Keywords: • Property management

Distribution media: disk, magnetic tape.

This interactive residential receivables system can manage 950 properties and 9500 rental units within each property and can be used for apartments, condos, student housing, single- and multifamily housing, and so on. Concurrent cash and accrual accounting is provided in a system that manages property and tenants, including tenant inquiry, separate tenant and applicant master files, automatic transfer of applicants to tenant file, rent roll (automatic update of tenant receivables), current and historical tenant ledgers, monthly statements, second notices, special billings, receivables posting by classifications or by priority, late notices and charges, project management reports, and more. This on-line, multiuser system is integrated with other Landmark systems.

Price: Available upon request

Contact: Carol Ryan, Marketing Director
(201) 722-5100

LANDMARK SOFTWARE SYSTEMS, INC.
155 W. Main Street
Somerville, NJ 08876

Timeshare Contract Management System

Operating System: VMS

Keywords: • Financial management • Sales and marketing
• Service industries

This system is designed to manage deposits, contracts, commissions, and sales performance information for companies that sell vacation time sharing. The system's functions include deposit accounting, sales contract processing, commission accounting, and cancellation processing. Deposit functions allow the entry of one or more deposits for each client prior to entry of the contract. Sales contract entry allows automatic retrieval of deposit information from the deposit file or direct entry of deposits received. All contract data is verified at contract entry against attribute files, financing algorithms, and policy information. The system differentiates between broker and company sales. Input of tax information, deductions from sales, and bonus weeks are provided, with appropriate accounting accommodated. All financing information, including processing fees, is verified, with erroneous contracts rejected. Salesperson and broker commissions are computed (up to six for each contract) and posted to the salesperson/broker file. A general ledger interface file is produced as a part of the update, with provisions for interfacing deposit accounts, sales accounts, accounts receivable, current and deferred commission, tax and deduction amounts, and forfeiture income by sales office. Contract cancellation provides for inputting refund information with computation of forfeiture income, adjustment to commissions earned, and appropriate general ledger entries.

Supporting files include salesperson/broker, type of sale, and office G/L account file. The date-driven system provides contract file listings, sales analysis by salesperson/broker, type of sale, and sales by sales office for any period of time. Commission records are maintained by salesperson, with 1099s provided at year end. Deposit accounting provides aged reports of deposits on file by client by any date periods.

The system is designed to interface with the Compu-Share general ledger system and uses the CSI screen-handling functions.

A version of this product is available for the PDP-11 computer.

1474 Real Estate

Price: \$4000

Contact: William L. Dempsey
(702) 384-7641

SIMCO, INC.

801 S. Rancho Drive, Suite E-2
Las Vegas, NV 89106

Recreation



George Bellrose/Stock, Boston

Barrel Jump

Operating System: VMS

Keywords: • Games

Distribution medium: magnetic tape.

Barrel Jump is very similar to the arcade game Donkey Kong. However, the rules are different, and the user is prompted at the beginning of the game if instructions are needed. You should run this game at 9600 baud, since MARIO times out in one second after you jump. DECUS number VAX-62.

Price: \$5 - \$225

Contact: DECUS (see Introduction)

BOCS (Box Office Computer System)

Operating System: VMS

Keywords: • Point of sale • Real time

This package is a real-time seat reservation and ticketing system for theaters, leisure centers, and sports arenas. BOCS is appropriate for single or multivenue entertainment complexes with 500 to 100,000 seats.

BOCS offers unique displays of seating plans, and users have complete freedom and control over ticket content and format. The system includes all the functionality to handle single, group, and subscription sales, with full marketing and donor recording and analysis. Stand-by facilities and a fully integrated private viewdata option are available to provide a remote sales network.

BOCS is normally supplied as a total installation package, including hardware, software, training, documentation, support, and maintenance and may be purchased outright, leased, or rented.

A version of this product is available for the PDP-11 computer.

Price: \$40,000 - \$700,000

Contact: Karl Sydow, Vice President, Sales
(212) 496-8994

SPACE-TIME SYSTEMS, INC.
155 West 72nd Street, Suite 503
New York, NY 10023

Boeing 747 Flight Simulator

Operating System: VMS

Keywords: • Games

This instrument simulation program imitates the characteristics of a Boeing 747 aircraft during a flight from New York's John F. Kennedy airport (NYC) to Bradley Field, Hartford (BDC). The simulation runs on any VT100-type terminal in ANSI mode and features a full ILS landing sequence and air traffic control during the flight. DECUS number VAX-94.

Price: \$5 – \$225

Contact: DECUS (see Introduction)

CALEND: A Calendar Program

Operating System: VMS

Keywords: • Presentation aids

Memory required: 6144KB.

A calendar is produced for any year between 1901 and 2099. The user is prompted for the year. The calendar is then written to a file named CALEND.PRT, after which the program exits. The print file may be written to a line printer or a terminal. DECUS number 11-766.

A version of this product is available for the PDP-11 computer.

Price: \$5 – \$225

Contact: DECUS (see Introduction)

Chess Ingenuity®

Operating System: MicroVMS, VMS

Keywords: • Games

Memory required: 32KW. Distribution medium: RX50.

This system for playing and teaching chess has many easy-to-use features that make it ideal for amateurs and useful to stronger players as well. Chess Ingenuity is written in BASIC-PLUS-2. The system includes arrow-key and algebraic-move modes, save and restore games, "chess movies" (game replays), on-screen commands and help, supplied Grand Master games, move-evaluation scores, two board styles, default difficulty levels (1 to 9), game score log files, a list or display of all legal moves, an edit mode (position setup), a game time clock, a visible chess-tree search, and a look-ahead parameter adjustment.

A version of this product is available for the PDP-11 computer.

Price: \$39.95 – \$49.95

Contact: Kenneth Presley

(502) 448-2719

COMPUTER INGENUITY CONSULTING ASSOCIATES,
INC.

4513 Flintlock Drive

Louisville, KY 40216

Conquest

Operating System: VMS

Keywords: • Games

Distribution medium: magnetic tape.

Conquest is a multiplayer, real-time, screen-oriented space war game. It is based on the game called "Empire" on the PLATO computer system and runs on virtually any kind of cursor-addressable CRT. DECUS number VAX-72.

Note: Privileges are required to install the game. Elaborate restrictions on the game can be specified by the installer. Sources are not included.

Price: \$5 - \$225

Contact: DECUS (see Introduction)

DODGEM: A Maze Game

Operating System: VMS

Keywords: • Games

Memory required: 138,752 bytes, 271 pages.

DODGEM, a game similar to PACMAN games, takes advantage of the direct cursor addressing and graphic font available on VT100 and equivalent VDUs. The program runs in a real-time environment, so quick reactions and nimble fingers help enormously.

Instructions are displayed before and during play to let you devote all your attention to the screen.

The program supports "escape holes" at the side of the board (to move around at random), "zapping" parts of the board (to save yourself in emergencies), and reverse mode (where you do the chasing).

Three levels of play are catered for, from novice to expert, and a league table of the top 15 scores is maintained for each.

Health warning: This game is extremely addictive and is bad for your nerves.

Documentation is on magnetic media. DECUS number VAX-39.

Price: \$5 - \$225

Contact: DECUS (see Introduction)

Empire: War Game of the Century

Operating System: VMS

Keywords: • Games

Distribution medium: magnetic tape.

Empire is a strategy and tactics war game, pitting you against the computer. The game is played on a computer-generated map that contains land areas, sea areas, and cities. The object of the game is to eliminate the opponent by capturing cities and destroying the enemy forces. Cities once captured have production capability and can produce units such as armies, fighters, destroyers, submarines, or carriers for offense or defense. Of course, the computer is trying to crush your forces and take over the world, as are you.

Early in the game, exploration is most predominant, followed later by planned offensives and holding actions, until eventual victory or defeat.

Warning: Typical games can take as long as 10 hours, and some people find the game addictive. The program keeps the game state in a disk file, and a single game usually takes multiple terminal sessions. The .DOC file containing the instructions is correct and complete but is terse and lacks examples, which sometimes causes confusion in the first games. DECUS number VAX-12.

Documentation is on magnetic media. Sources are not included.

Price: \$5 - \$225

Contact: DECUS (see Introduction)

Football

Operating System: VMS

Keywords: • Games

Distribution media: 9-track 1600 bpi magnetic tape, cassette.

This interactive football game between one player and the computer is written in VAX-11 PL/I and is also available in VAX-11 FORTRAN. The game includes 26 professional teams or 26 major college teams and features 2-point conversions, standings, penalties, timeouts, and so on.

Price: \$25 - \$250

Contact: Richard Snyder
(215) 258-6610

APPLIED SYSTEMS AND PROGRAMMING
138 Jonathan Drive
Easton, PA 18042

Genral: The Great War Game

Operating System: VMS

Keywords: • Games

Memory required: 32KW.

Time: The Nineteenth Century

Place: The Frontier Between Anchovy and Baklava

Anchovy has assembled a large army to invade Baklava, a neighboring state. The aim of the invasion is to capture a majority of the Baklavan towns or to destroy the opposing army. Baklava hopes to counterattack and capture Anchovian towns or to drive out and destroy the invaders.

Genral is a game of resource management. Cavalry, infantry, and artillery units contend for control of roads, rivers, hills, towns, bridges, and forests. Strategic decisions must be made in real time, aided by statistical reports and animated video displays. An extensive instruction manual is provided. DECUS number 11-500.

A version of this product is available for the PDP-11 computer.

1480 Recreation

Price: \$5 - \$225

Contact: DECUS (see Introduction)

Hornet

Operating System: VMS

Keywords: • Games

Memory required: Approximately 24K bytes.

Yet another version of Star Trek not unlike many of the versions in use, Hornet is written in Pascal and should serve as a moderately good example of structured programming. Many areas can be improved, and any young hackers should feel free to modify or rewrite the program at will. Run the program and it will ask you if you want help.

A VT52-compatible terminal should be run at 9600 baud. This program is also distributed as DECUS number 11-443.

The compiled program will run on VAX/VMS. Source is in VAX native Pascal and Swedish Pascal.

Documentation is on magnetic media. DECUS number VAX-11.

Price: \$5 - \$225

Contact: DECUS (see Introduction)

MAZE

Operating System: VMS

Keywords: • Games

Memory required: Peak virtual pages approximately 171.

MAZE is written in PL/I and creates mazes of various sizes and shapes. The mazes are rectangular and have external start and end points. The user may specify the size of the maze, constraining points for the true path, and the number of false paths to be generated. Mazes can be generated in sizes ranging from trivial 2-by-2 mazes to monstrous ones filling many pages of standard line printer paper.

Documentation is on magnetic media. DECUS number VAX-8.

Price: \$5 - \$225

Contact: DECUS (see Introduction)

MTREK

Operating System: VMS

Keywords: • Games

Distribution medium: magnetic tape.

The game is very similar to the traditional Star-Trek game, with the following exceptions. First, the game involves one to eight players, each of whom has a terminal and a starship. Second, the game runs in real time as far as the players are concerned. For example, if you are going warp 8, you will continue to move regardless of your activity at the terminal, unless you are destroyed, hit something, run out of

energy, or change your warp speed. Each player's status and position as well as the scores of all players are displayed and continuously updated at each player's terminal. (The updated rate is 2.5 times a second, but the source code is commented on where to change it if you wish to do so.) Third, there are no Klingons or Romulans to shoot down; instead, you shoot — or at least attempt to shoot — the other players.

Documentation is on magnetic media. DECUS number VAX-37.

Price: \$5 – \$225

Contact: DECUS (see Introduction)

NEWPOKER

Operating System: VMS

Keywords: • Games

Memory required: 248B. Distribution medium: magnetic tape.

This video poker game uses a full deck of 52 cards, displays the cards instead of telling you about them, and cannot see what is in your hand (until time to compare the hands). The game was created for VAX/VMS but with a few modifications will run on PDPs as well.

NEWPOKER works on any VT100-compatible terminal and uses little memory. Included are a documentation file to instruct the players, the source code (so you can tinker with it), and the executable image. DECUS number VAX-45.

Restrictions: NEWPOKER cannot "check" the bet.

Price: \$5 – \$225

Contact: DECUS (see Introduction)

Pic-Pak: Computer Picture Collection

Operating System: Independent

Keywords: • Games

This collection of ASCII picture files obtained from DIGITAL, M.I.T., and other sources can be printed on any line printer for reproduction. Any machine that can handle ASCII code may be used. The files should be both machine- and operating system-independent within that restriction.

To obtain the proper aspect ratio, the line printer should operate at 10 characters/horizontal inch and at 8 lines/vertical inch. If an LA120, LA34, or LA38 terminal is used to print the pictures, any of those printers may also be set at 16.5 characters/horizontal inch and at 12 lines/vertical inch for a smaller picture. DECUS number 11-422.

A version of this product is available for the PDP-11 computer.

Price: \$5 – \$225

Contact: DECUS (see Introduction)

QUICKCHESS (Speed Chess Simulator)

Operating System: VMS

Keywords: • Games

QUICKCHESS is a speed (timed) chess simulator program that allows two players to sit at different VT100 terminals and play speed chess. The board is drawn on each player's screen in double-width/double-height characters, with each player's pieces at the bottom of the screen. The board squares are separated by graphic vertical and horizontal lines, and alternating squares are in reverse video for the light/dark diagonal perspective. Each player's remaining game time in minutes:seconds is shown in the corners of the screen and is visually updated each second. The names of both players and their last moves are also shown in each corner.

Move input is through standard international algebraic notation. All moves are checked for legality, with any illegal move requiring reinput by the player. Upon input of a legal move, the boards are updated through direct cursor addressing; the player's clock is stopped; an audible alarm sounds; and the player's opponent's clock is started. Play continues in that manner until one of the players runs out of time or loses the game in a normal manner.

All legal chess moves are allowed and are logged in a game log file (a different log file name is used for each run so all games may be saved) along with the player's remaining time after each move.

A version of this product is available for the PDP-11 computer.

Price: \$100 - \$200

Contact: Kenneth Alan Presley, President
(502) 448-2719

COMPUTER INGENUITY CONSULTING ASSOCIATES,
INC.

4513 Flintlock Drive
Louisville, KY 40216

Sporty

Operating System: VMS

Keywords: • Information management • Inventory • Retail
• Sales analysis

This complete inventory management system for the sporting goods retailer with branch locations records a year's inventory through purchasing, receiving, transferring, selling, and reporting. Sporty consists of four screen menus of programs. The first menu is for the setup and maintenance of files such as inventory item, department/class, vendor, and size tables. The second menu allows for purchasing, receiving, and transferring stock. The third menu is for recording sales and for producing reports that reflect the status of the inventory. The fourth menu covers a complete selection of reports.

A version of this product is available for the PDP-11 computer.

Price: \$5000 – \$10,000

Contact: Nigel Harris
(613) 829-8888

HARRIS COMPUTER SYSTEMS

16 Credit Union Way

Nepean, Ontario K2H 3R6

Canada

Super Star Trek

Operating System: VMS

Keywords: • Games

This game, based on the popular television series "Star Trek," is a game of search and destroy, with a command set of more than 25 English-language commands. During play, complete instructions are available in a help facility.

The game will execute on either a hard-copy or video terminal. If, however, a VT100 is available, the program will enter a special display mode that displays and maintains status information on the screen.

The source, not available through DECUS, embodies the complete solution to the game. It is the intention of the authors to keep the solution confidential.

Documentation is on magnetic media. DECUS number VAX-3.

Price: \$5 – \$225

Contact: DECUS (see Introduction)

Vulcan

Operating System: VMS

Keywords: • Games

Vulcan is a chess game written in VAX MACRO. More specifically, the game was written in a set of structured programming macros included in the kit.

The evaluation module is essentially empty. The only evaluation strategy is one of board position. The internal board layout is a copy of the board in the SARGON microcomputer program. Most features are documented in the help file.

All object and exe files are supplied except one ISAM file that cannot be written on magnetic tape (it is recreated at installation time).

Documentation is on magnetic media. DECUS number VAX-19.

Price: \$5 – \$225

Contact: DECUS (see Introduction)

Yatzee

Operating System: VMS

Keywords: • Games

Distribution media: 9-track 1600 bpi magnetic tape, cassette.

This game simulates the board game of Yahtzee. Written in VAX-11 PL/I and also available in VAX-11 FORTRAN and IBM CICS, Yatzee is for one to four players.

Price: \$25 - \$250

Contact: Richard Snyder
(215) 258-6610

APPLIED SYSTEMS AND PROGRAMMING

138 Jonathan Drive
Easton, PA 18042

Research



Camérigue

Applications Software for Chemical Research

Operating System: VMS

Keywords: • Chemical • Data base management • Simulation

Molecular Design Limited's integrated product line of applications software for research chemists consists of MACCS,[™] REACCS,[™] DATAACS, CHEMLAB, PRXBLD, MM2/MMP2, DISP, COMPAR, SPACFIL, PREP/ORTEP, GENOA, and ADAPT. MACCS and REACCS are graphical data base management systems that, by means of structural diagrams, allow immediate access to personal, company, or published data about chemical compounds and reactions.

MDL also offers software for molecular modeling. Those computational and display programs allow a user to build optimized representations of 3-dimensional graphical models and to estimate biological and physical properties of chemical compounds. Additional software applications include Quantitative Structure/Activity Relationship (QSAR) analysis, user-defined report generation from one or more data bases, and artificial intelligence applications for the design of new molecules.

Price: Available upon request

Contact: Judy Reimer

(415) 581-1996

MOLECULAR DESIGN LTD.

1122 B Street

Hayward, CA 94541

BMDP Statistical Software

Operating System: ULTRIX-32, UNIX* (Berkeley), VMS

Keywords: • Data collection • Scientific • Statistics

These programs aid data analysis by providing functions that range from simple data display and description to advanced statistical techniques. Data is analyzed by an iterative "examine and modify" series of steps. First, the data is examined for unreasonable values, graphically and numerically. If unreasonable values are found, they are checked and, if possible, corrected. An analysis is then performed. That analysis may identify other inconsistent observations or indicate that further analyses are needed.

The BMDP programs are organized so that the problem to be analyzed, the variables to be used in the analysis, and the layout of the data are specified in a uniform manner. That permits different analyses of the same data with minor changes in the instructions. Instructions are given in an English-like control language. Data can be stored or passed between programs, using self-documented BMDP files.

This package contains 40 programs loosely classified under data description, frequency tables, regression analysis, analysis of variance, multivariate analysis, life tables and survival analysis, time-series analysis, and miscellaneous techniques.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$1050/yr - \$2900/yr

Contact: Lynda K. Glassner

(213) 475-5700 or Telex: 4992203

BMDP STATISTICAL SOFTWARE, INC.

1964 Westwood Boulevard, Suite 202

Los Angeles, CA 90025

CDM (Chemistry Data Management)

Operating System: VMS

Keywords: • Data base management • Data collection
• Medical • Nuclear

This system allows the laboratory manager to monitor lab conditions and trends by accessing measurement data and by generating up-to-the-minute reports. CDM provides color graphics trend plots for easy parameter comparisons, on-line storage of a typical year's data, an out-of-limits summary for each shift, and a flexible data base inquiry capability.

CDM adapts to individual procedures and nomenclature. The initial directory file describes each sampling point by unique identifier, system, measurement types, and limits. Once the directory has been established, a measurement file is created that describes measurement entries by measurement value, time and date, and operating conditions. Operator comments and percent of operating power can also be included.

Price: \$15,000 - \$25,000

Contact: Terry Gahl

(404) 434-9889

NUCLEAR DATA, INC.

2734 South Cobb Industrial Boulevard

Smyrna, GA 30080

CHROM (Chromatography Graphics and Analysis)

Operating System: UNIX* (Berkeley, System III, System V), VMS

Keywords: • Chemical • Engineering • Graphics
• Numerical analysis

This interactive program plots and quantitatively analyzes up to two sets of chromatography data, based on sequential samples obtained from one or two chromatographic analyses. Data is stored in one or two 2- to 4-column files. File names and column identifiers (abscissa and ordinate axes) are input interactively, as are several other user options. Entire chromatograms or portions of interest are plotted and scaled automatically. One or both chromatograms are analyzed by numerical integration of all peaks. The results are expressed directly on the same plot, at the same time, as a percentage in each peak of the

total ordinate units recovered in the chromatogram — for example, percent in each peak of total radioactivity cpm recovered in all chromatographic samples.

The program is written in FORTRAN, in modular form, for the VT55 graphics terminal. Adaptation to other terminals/devices should not be difficult. Full source code is provided.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$500 +

Contact: Dr. Joseph J. DiStefano III, Professor

(213) 825-7482 or 825-4033

UNIVERSITY OF CALIFORNIA, LOS ANGELES

School of Engineering and Applied Science

Biocybernetics Laboratory, 4731K Boelter Hall

Los Angeles, CA 90024

CHROMPAK (Chromatography Analysis Package)

Operating System: UNIX* (Berkeley, System III, System V), VMS

Keywords: • Chemical • Data collection • Engineering
• Health care

CHROMPAK helps collect and analyze chromatography data. Modular programs are quickly adapted to a variety of measuring instruments and collection techniques. The following programs are available:

- DATAIN collects and stores data from a gamma or beta counter, spectrophotometer, and so on. Data files are multicolumn, ASCII format for use with other utilities.
- PEAKS analyzes data files and reports on total data, location and percentage of peaks, percent total recovery, and other invaluable statistics.
- SUMGRAM sums or integrates all the data in a file (chromatogram).
- CHROMPLOT displays one or two chromatography files on a CRT terminal. Functions are same as CHROM.
- BKSUB accepts two input files — one data file and one instrument noise file. The output is a file with noise subtracted from data.
- DELA, DELB strips off one or more columns from a multicolumn data file.
- CORRECT allows the user to adjust data values to compensate for machine or technique idiosyncrasies, such as tube geometry or volume correction for a gamma counter.
- NORM normalizes a multicolumn file to time, volume, and so forth.
- ZEROSERT inserts zero data values in a data file.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$1000 - \$2000

Contact: Dr. Joseph J. DiStefano III, Professor
(213) 825-7482

UNIVERSITY OF CALIFORNIA, LOS ANGELES
School of Engineering and Applied Science
Biocybernetics Laboratory, 4731K Boelter Hall
Los Angeles, CA 90024

CLIN-TEAMS®

Operating System: VMS

Keywords: • Data collection • Health care • Medical
• Scientific

This integrated system of programs for the clinical trial environment collects data on computers as small as a single-user system and is offered in a BASIC-PLUS-2 version. Data, collected by filling in case report form images on the CRT, is transferred at predetermined intervals for integration into the central data base.

Data collection formats for new studies can be set up (protocol compiled) interactively without reprogramming. Branching logic in the system directs the user to specific questions based on the response to the current question.

This flexible, user-friendly system is both menu driven and protocol driven. A monitoring report-generating facility lets you tailor interim reports and unload the data to a sequential data file for use with statistical analysis programs, such as SPSS, BMDP, and SAS.

Other programs can run while CLIN-TEAMS is being used, allowing it to fit well into a multiuser, multiprogramming environment on the host computer.

A version of this product is available for the PDP-11 computer.

Price: \$46,000

Contact: Floyd E. Leaders, Jr., Ph.D.
(214) 386-5764

TECHNICAL EVALUATION AND MANAGEMENT
SERVICES, INC.
13601 Preston Road, 820 Carillon Tower West
Dallas, TX 75240

DATAIN

Operating System: UNIX* (Berkeley, System III, System V), VMS

Keywords: • Biology • Data collection
• Device drivers/handlers • Engineering

DATAIN is a computer/laboratory instrument interface written in C. DATAIN is adaptable to any instrument with an asynchronous serial (RS232) interface.

The program establishes contact with the instrument, conditions I/O channels, and opens input files. The operator is then prompted to begin data transmission. Operator intervention is not necessary until collection is stopped. Thus, DATAIN can be run unattended for long periods.

Files are automatically named by date or may be individually named by the operator. The data is error checked at input and is stored as ASCII characters for easy interpretation and manipulation by other program tools.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$500 - \$1000

Contact: Dr. Joseph J. DiStefano III, Professor
(213) 825-7482 or 825-4033

UNIVERSITY OF CALIFORNIA, LOS ANGELES
School of Engineering and Applied Science
Biocybernetics Laboratory, 4731K Boelter Hall
Los Angeles, CA 90024

FITPACK (Curve and Surface Fitting Package)

Operating System: VMS

Keywords: • Mathematics

FITPACK is a collection of FORTRAN programs for curve and surface fitting, using spline functions. Automatic knot selection, error smoothing, and data reduction are included. The user provides a parameter by which to control the trade-off between closeness of fit and smoothness of fit. Confidence limits for that parameter are available if the statistical errors on the data points can be estimated.

In addition to a standard routine for curve fitting over an interval and a routine for surface fitting over a rectangle, the package contains special programs for smoothing periodic functions, parametric curves (closed or otherwise), functions with convexity constraints, and data over a rectangular grid and over the sphere. Routines are included for evaluating, differentiating, and integrating the spline approximations.

A version of this product is available for the PDP-11 computer.

Price: \$50

Contact: Paul Dierckx
32-16-20-06-56

UNIVERSITY OF LEUVEN, DEPT. OF COMPUTER
SCIENCE
Celestijnenlaan 200 A
B-3030 Heverlee
Belgium

Gamma Spectroscopy Applications Package

Operating System: VMS

Keywords: • Calculation aids • Instrumentation • Nuclear
• Scientific

Distribution media: 9-track 1600 bpi magnetic tape, RX01, RX02, RX50, TU58 DEctape II cartridge.

This set of programs, written in FORTRAN, performs quantitative analysis of high-resolution gamma-ray spectra. The package enables a user to control and transfer data to/from a multichannel analyzer, as well as to find the area and energy of all photopeaks in a gamma-ray spectrum. Programs include a peak-determination routine, an isotope activity calculation, environmental background subtraction, and system calibration routines. The peak-determination program allows multiple resolution (deconvolution) of up to 10 peaks in a single region, yielding peak area, energy, and statistics. The environmental background routine includes background subtraction, correction for interfacing or unresolvable peaks, and a weighted-mean activity calculation for isotopes having multiple peaks.

An optional quality assurance package provides a means to verify and record spectroscopy system performance over time.

A version of this product is available for the PDP-11 computer.

Price: \$4250 - \$10,000

Contact: R. J. Schlossmann
(312) 884-3627

NUCLEAR DATA, INC.
Golf and Meacham Roads
Schaumburg, IL 60196

GENSTAT (General Statistical Program)

Operating System: Independent, ULTRIX-32, UNIX* (Berkeley), VMS

Keywords: • Mathematics • Numerical analysis • Statistics

Distribution medium: magnetic tape.

This package includes standard analyses, provides a powerful interpretive programming language for the specification of other analyses, and has extensive facilities for data management. GENSTAT is a single FORTRAN program that uses about 1MB when compiled.

The analyses cover regression, including multiple linear regression and parallel regressions with analysis of parallelism. In addition, generalized linear models allow nonadditivity of model terms and non-normality of errors to be handled separately. Functions allow the observed means to be linked to the values predicted by the model and provide a choice of four error distributions. The system performs non-linear models, such as $y = a + b \exp(cx) + \text{error}$, that cannot be made linear but that can be fitted iteratively. For the analysis of

designed experiments, GENSTAT can analyze generally balanced experimental designs. Designs with more than one error term can be handled.

Cluster analysis is also handled. Classifications may be based on qualitative or quantitative characters. Hierarchical classifications can use various similarity measures. Nearest neighbors, most typical members of clusters, minimum spanning trees, and dendrograms can be obtained. Nonhierarchical classification methods are available.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: £390/yr – £780/yr

Contact: M. G. Richardson
+ 44 865 511245

NUMERICAL ALGORITHMS GROUP LTD.
256 Banbury Road
Oxford OX2 7DE
United Kingdom

GLIM-3

Operating System: UNIX* (Berkeley, System V), VMS

Keywords: • Education • Mathematics • Statistics

GLIM-3 was developed by the British Royal Statistical Society for generalized linear modeling, vector calculation with various output options, data exploration, and teaching. As a modeling aid, GLIM-3 handles linear, loglinear, logit and probit models, and models with gamma errors. Specification of standard models is simple but powerful, allowing refinements, such as prior weights and the fixing of certain parameter values. Any generalized linear model can be handled and robust regression procedures developed. Powerful macro definition facilities are available.

GLIM-3 can operate with general arithmetic expression on vectors and scalars; subvectors are easily manipulated. The package can be used interactively or in batch mode. Interactive use is appropriate to data exploration — for instance, in the search for linearity-inducing transformations. As a teaching aid, GLIM-3 lets the student concentrate on the statistical aspects of a problem without concern about arithmetic.

GLIM-3 consists of a single FORTRAN program of about 11,500 lines, of which about 40% are comments. The program runs efficiently in an overlaid form.

In North America, contact James C. T. Pool (312) 971-2337, Numerical Algorithms Group, Inc., 1101 31st Street, Suite 100, Downers Grove, IL 60515.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: £180 – £360

Contact: Janet Webb

+ 44 865 511245

NUMERICAL ALGORITHMS GROUP LTD.

NAG Central Office

Mayfield House, 256 Danbury Road

Oxford OX2 7DE

United Kingdom

GSP (Germanium Spectroscopy Systems)

Operating System: VMS

Keywords: • Instrumentation • Nuclear • Quality control
• Scientific

These programs facilitate the calibration, library preparation, and gamma isotopic analysis procedures related to germanium spectrometer systems. GSP provides the basic elements of successful radionuclide identification, using gamma-ray spectroscopy.

For energy and efficiency calibration, either linear or quadratic energy calibration is available. The entry of the calibration curve may be automatic or manual. Each geometry can be recalibrated for efficiency in less than 15 minutes. Efficiency curve calculations can be spline, polynomial, and double exponential.

For radionuclide library data entry, many standard nuclide libraries are available. Existing libraries can be modified with an easy-to-use editor. New, application-specific custom libraries can be created as well.

Data reduction and reporting offers a choice of automatic peak reduction or detail spectrum dissecting. A peak search report details parameters of interest for each peak. Other features are automatic isotope identification and decay-corrected activity for each unit volume or weight.

Price: \$6000 – \$9000

Contact: Terry Gahl

(404) 434-9889

NUCLEAR DATA, INC.

2734 South Cobb Industrial Boulevard

Smyrna, GA 30080

IAE (Interactive Editor)™

Operating System: VMS

Keywords: • Scientific • Signal processing • Text management

Developed by Signal Technology, Inc., this FORTRAN program for editing speech parameters for hardware and software speech synthesizers features vocabulary generation in a voice-response system, speech synthesis-quality enhancement, acoustic/phonetic experimentation, speech parameter plotting and verification, and parameter

manipulation, interpolation, and transformation. IAE allows manipulation of speech parameters generated by linear prediction or format-analysis programs. Standard mnemonic names identify the speech parameters. Twenty locations are reserved for additional parameters with user-definable mnemonic names. The editing features permit display of up to five parameter tracks at a time or the printing of numeric values. The editor can replace old values with new ones, move and scale parameters, and interpolate parameters over specified time intervals. IAE utilities transform frequency and bandwidth data to linear prediction coefficients.

The IAE program is an add-on option to Signal Technology's Interactive Laboratory System (ILS), which is a high-level software package for user-oriented digital signal processing.

DIGITAL distributes this software product under license from Signal Technology, Inc., 5951 Encina Rd., Goleta, CA 93117.

Refer to SPD #A0.20.xx when requesting further information on this product from your local DIGITAL sales office.

IAE (Interactive Editor)[™] is a trademark of Signal Technology, Inc.

A version of this product is available for the PDP-11 computer.

Price: \$5000

Contact: Consult your local DIGITAL sales office (see Introduction).

IDL (Interactive Data Language)

Operating System: VMS

Keywords: • Engineering • Graphics • Scientific

Distribution medium: magnetic tape.

This interactive software system analyzes, reduces, and displays scientific and engineering data. IDL combines self-describing array-oriented data sets, operators, functions, and powerful graphic and image-display capabilities into a complete interactive system.

Applications include physics, astronomy, medicine, engineering, and image processing.

A version of this product is available for the PDP-11 computer.

Price: \$2750 - \$10,700

Contact: David M. Stern
(303) 399-1326

RESEARCH SYSTEMS, INC.

2021 Albion Street
Denver, CO 80207

LIMS/SM (Laboratory Information Management System/Sample Management)

Operating System: VMS

Keywords: • Data base management • Data collection
• Data dictionary • Medical

This data base management system is layered on VAX DATATRIEVE, VAX DBMS, VAX Common Data Dictionary, and VAX FMS Form Driver and performs sample-tracking applications in testing laboratories. The product consists of the data base schema and applications programs needed to form a fully functioning system.

VAX LIMS/SM provides sample log in, with sample identification or sample numbers generated by the system; worklist generation and backlog reports; collection lists of samples that have been entered into the system but that have not been picked up or sent to the lab; sample status reports, to check the progress of a sample through the lab; result reports on completed samples; audit trails for sample data (magnetic tape required); and data archiving (magnetic tape suggested).

VAX LIMS/SM includes two predefined plots for subject and sample trends. Plots can be displayed only on a VT125. Hard copy can be obtained by an LA34-VA (or similar capability printer) attached to the VT125.

Refer to SPD #26.18.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$23,175 – \$38,610

Contact: Consult your local DIGITAL sales office (see Introduction).

MATH/PROTRAN

Operating System: VMS

Keywords: • Mathematics • Programming tools • Scientific

MATH/PROTRAN is a member of the powerful, user-oriented PROTRAN family of problem-solving systems for mathematical problems. This versatile system presents a straightforward approach to mathematical problem solving. The system is extremely easy to use yet powerful enough to handle a broad spectrum of mathematical problems in such areas as interpolation and data smoothing; integration and differentiation, differential equations, linear algebraic equations, eigenvalues and eigenvectors, nonlinear equations, optimization, transforms, sorting, and elementary operations and random-number generation. The user can intermix PROTRAN with FORTRAN for added flexibility.

Price: \$500/yr – \$1700/yr

Contact: Sales Division
(713) 772-1927

IMSL, INC.

7500 Bellaire Boulevard, NBC Building
Houston, TX 77036

Minitab® Data Analysis Software

Operating System: UNIX* (Berkeley), VMS

Keywords: • Engineering • Mathematics • Scientific
• Statistics

Distribution medium: 800/1600 bpi magnetic tape.

This general-purpose data analysis system for engineers, social and physical scientists, managers, students, statisticians, and others has 100% compatible batch and interactive modes and is also completely compatible among all supported processors. Data analysis includes descriptive statistics; flexible plotting, including histograms and other displays; multiway tables in various layouts; regression with residual analysis, diagnostics, and stepwise procedures; analysis of variance; nonparametric methods; exploratory data analysis, including features developed by John Tukey; and time series analysis, including Box-Jenkin procedures. General features include easy transformations and coding, automatic handling of missing values, data editing and manipulation, and input/output from terminal or files.

Complete documentation is available in the *Minitab Reference Manual*, the *Minitab Handbook*, and the *Quick Reference Card* and through the on-line help facility.

Most Minitab sessions require just a few straightforward commands; new users need less than one hour to get started.

The price range for academic users is \$250 to \$500. Quantity discounts of 20% and 50% are available to qualified customers.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$500 - \$1000

Contact: Mary E. Montminy or Vicki L. Jodan
(814) 238-3280

MINITAB, INC.
3081 Enterprise Drive
State College, PA 16801

Minitab® Graphics Option

Operating System: VMS

Keywords: • Education • Graphics • Mathematics
• Statistics

Distribution medium: 9-track 800/1600 bpi magnetic tape.

This add-on capability improves the graphics output of Minitab Data Analysis Software by enabling a user to produce high-resolution versions of Minitab scatterplots and boxplots. The Graphics Option provides both useful plots to the working statistician and attractive plots for presentation purposes. With the Graphics Option, a user can also perform operations that cannot be performed with Minitab alone. For

example, a user can draw up to 20 lines on a single plot. Because Graphics Option commands are simple and look like the corresponding printer commands, they are easy to learn and use.

The Graphics Option can use a variety of graphics terminals and plotters, including DIGITAL VT125, Tektronix 4010-compatible devices (for example, Retrographics), Tektronix 4027, 4662, and HP7470a. That option is compatible across all supported devices; when the same set of observations is plotted on each device, the resulting plots will have the same labels, scales, and format.

The lower price is for academic customers only.

Price: \$250/yr – \$500/yr

Contact: Mary E. Montminy or Vicki L. Jordan
(814) 238-3280

MINITAB, INC.

3081 Enterprise Drive
State College, PA 16801

MLP (Maximum Likelihood Program)

Operating System: Independent, ULTRIX-32, UNIX* (Berkeley), VMS

Keywords: • Mathematics • Numerical analysis • Statistics
Distribution medium: magnetic tape.

This general statistical model fitting program provides many standard models, curves, discrete distributions, continuous distributions, assay analysis, linear regression, genetic models, and transition matrix models. For general models, the error distribution can be weighted normal, binomial, Poisson, multinomial, Gamma, or negative binomial. Equally spaced observations may be serially correlated. Expectations and weights may be any computable function of parameters.

The MLP language is simple for standard applications. Directives and option settings control input, choice of model, fitting, and output. General models in which variables and parameters and scalars may be given user-defined names are defined. Intermediate results may be stored, transformed, or output to interface with other programs. Help and diagnostic facilities are provided.

MLP consists of a single FORTRAN program of about 23,000 lines, which compiles to about 300 kilobytes on most computers.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: £156/yr – £312/yr

Contact: M. G. Richardson
+ 44 865 511245

NUMERICAL ALGORITHMS GROUP LTD.

256 Banbury Road

Oxford OX2 7DE

United Kingdom

NAG FORTRAN Library Service

Operating System: ULTRIX-32, UNIX* (Berkeley), VMS

Keywords: • Mathematics • Scientific • Statistics

Distribution medium: magnetic tape.

The NAG FORTRAN Library Service develops, issues, updates, maintains, and supports the NAG Library of subroutines. The NAG Library is a tailored collection of FORTRAN subroutines grouped into chapters of mathematics, operations research, and statistics. Within a chapter, each algorithm is selected to solve an identified type of problem. The Mark 11 NAG Library contains 524 subroutines.

The *NAG Library Manual* has the same chapter structure as the Library. Each subroutine has a document describing the routine and providing a program listing with input data and results. Each chapter introduction gives extensive advice on the selection of routines. An interactive on-line documentation supplement and a graphics supplement, including interfaces to many standard graphic devices, are available.

The NAG Library Service, available through a license agreement on an annual fee basis, includes regular updating of the Library contents; installation, maintenance, and support documentation; a complete set of user documentation; and an algorithms inquiry service.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$1600/yr – \$2700/yr

Contact: John Reeves
(0865) 511245

NUMERICAL ALGORITHMS GROUP LTD.

Mayfield House, 256 Banbury Road

Oxford OX2 7DE

United Kingdom

Neutron Activation Analysis

Operating System: VMS

Keywords: • Chemical • Instrumentation • Nuclear
• Scientific

Distribution media: 9-track 1600 bpi magnetic tape, RX01, RX02, RX50, TU58 DECTape II cartridge.

This package provides quantitative analysis of samples through either the comparative method or the reactor flux monitoring method. The comparative technique allows multiple standards for each chemical element, averaging results for all standards to calculate a calibration coefficient. The flux monitoring method is internal in methods of standardization.

This package is written in FORTRAN and is structured to allow easy user customization.

A version of this product is available for the PDP-11 computer.

Price: \$2000 - \$5000

Contact: Tom Meyers, Product Support Engineer
(312) 884-3627

NUCLEAR DATA, INC.
Golf and Meacham Roads
Schaumburg, IL 60196

Nuclide Identification Package

Operating System: VMS

Keywords: • Calculation aids • Environmental • Nuclear
• Scientific

Distribution media: 1600 bpi magnetic tape, RX01, RX02, RX50, TU58 DECTape II cartridge.

This software calculates the amount or activity of radioisotopes present in a gamma-ray spectrum. The package includes a total activity calculation and can calculate a minimum detectable activity for all isotopes not found. If desired, a weighted mean activity may be calculated for all isotopes having multiple photopeaks; interferences between unresolvable peaks may be removed before activities are calculated.

This package requires the Spectroscopy Applications Package. Help files and menu-driven tables for VT200-type terminals allow use by novice and sophisticated users.

Price: \$4000 - \$6000

Contact: R. J. Schlossmann
(312) 884-3627

NUCLEAR DATA, INC.
Golf and Meacham Roads
Schaumburg, IL 60196

OSS (Optimal Sampling Schedule Designs)

Operating System: UNIX* (Berkeley, System III, System V), VMS

Keywords: • Biology • Data collection • Pharmaceutical
• Statistics

OSS is a series of portable FORTRAN programs for computing D-optimal, discrete-time data sampling schedules — designs that maximize the determinant of the Fisher Information Matrix — for different types of standardized and general model and experiment types: “impulse response” or “step response” kinetic experiments in pharmacology and biology for single-input, single-output linear models (built in); multi-input, multioutput linear models (built in); or models of any form by means of FORTRAN user-provided subroutines. Other optimization criteria can be accommodated by substitution of one subroutine. The user has the choice of interactive or batch mode for program input, and both program input and program output are highly readable and user friendly. Telephone demos can be arranged.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$500 – \$5000

Contact: Dr. Joseph J. DiStefano III, Professor
(213) 825-7482

UNIVERSITY OF CALIFORNIA, LOS ANGELES
School of Engineering and Applied Science
Biocybernetics Laboratory, 4731K Boelter Hall
Los Angeles, CA 90024

P-Cubed (Picture Processing Package)

Operating System: VMS

Keywords: • Application development • CAD/CAM • Graphics
• Scientific

P-Cubed, developed by Advanced Technology Center, is an integrated software system designed for image processing research and applications development work. The system provides coherence, uniformity, and structure to a group developing image processing-related software. P-Cubed reduces frustration, cost, and valuable time associated with the do-it-yourself approach to software development.

This comprehensive library includes the basic image processing routines to develop applications programs. Also included are the necessary image handling and pixel access routines. This library provides the user with enormous power/functionality.

For users desiring a complete turnkey capability, a powerful command interpreter processes, manipulates, and analyzes images through built-in commands/functions. No programming is required to use those commands. The command interpreter is table driven and allows the user to add application-dependent commands to the system.

Price: \$8000

Contact: Cheryl Pankratz
(714) 998-6041

MIDCOM CORP.

1940 N. Tustin Avenue, Suite 117
Orange, CA 92665

PLACES (Pathology Lexicon, Acquisition, Correlation, and Evaluation System)

Operating System: VMS

Keywords: • Medical • Menu handlers • Pharmaceutical
• Report writer

PLACES provides a flexible mechanism for the direct entry of pathology data to an on-line computer system and for producing the reports required by regulatory authorities in preclinical safety evaluation studies. A key feature of the system is that it treats the recording and reporting aspects of pathology as two separate activities. During the recording process, a flexible menu-selection scheme allows the pathologist to record exactly what he or she wishes to record. The reporting sequence then allows the pathologist to rationalize findings in an iterative fashion, leading to the production of the most satisfactory incidence tables with no transcription — and with a full audit trail of the operations performed.

PLACES operates as a stand-alone software package but may also be interfaced to other packages, such as toxicology systems, for protocol and status information. The package includes a configuring utility that enables the customer to set up numbering schemes and so on; the table-driven system allows the customer to tailor the system without modifying the software.

PLACES systems are installed in agrochemical, pharmaceutical, and contract toxicology laboratories in Europe and in the United States.

A version of this product is available for the PDP-11 computer.

Price: £25,000 – £55,000

Contact: Dr. D. A. James
(0782) 620519

APOLOCO LTD.

90 King Street

Newcastle-Under-Lyme, Staffordshire ST5 1JB
England

RDE (Research Data Entry)™

Operating System: VMS

Keywords: • Data entry • Forms management • Scientific

RDE, developed by Bolt Beranek and Newman, Inc., provides capabilities for the design and creation of forms for review, modification, or reporting and the preparation of formatted output. The system features data entry, data retrieval, and audit trail of data modifications and compatibility with other BBN research systems, as well as with other PDP-11-based systems requiring forms-oriented data entry.

Features include:

- Data entry — Data is keyed directly into fields in forms presented on a CRT screen. RDE can check for number ranges, type of value, and menus of values during data input and can provide default values and sequential numbers for data fields.
- Audit trail — Data in RDE forms cannot be deleted. When values are changed, the original values are preserved with information about who made the changes, when, and why.
- Forms design — The user can produce RDE forms to match particular data entry needs by creating a text image of the form as it will appear on the screen and adding information about the data fields.
- Report design — RDE can prepare reports and displays of selected data in the format desired.
- Instrument data entry — Data from laboratory instruments can also be inserted into RDE forms.

DIGITAL distributes this software product under license from Bolt Beranek and Newman, Inc., One Alewife Place, Cambridge, MA 02140.

Refer to SPD #A0.13.xx when requesting further information on this product from your local DIGITAL sales office.

RDE (Research Data Entry)[™] is a trademark of Bolt Beranek and Newman, Inc.

A version of this product is available for the PDP-11 computer.

Price: \$4000

Contact: Consult your local DIGITAL sales office (see Introduction).

Reduce

Operating System: VMS

Keywords: • CAD/CAM • Engineering • Mathematics
• Scientific

Reduce, developed by Mirashanta, does symbolic logic manipulations and reductions on a set of Boolean equations. Those equations can describe a PLA, multilevel random logic, or any logic circuit without memory. Two methods of reduction exist. One eliminates parentheses and applies all the Boolean theorems on every combination of paired terms to combine or simplify them until each expression is a minimal "sum" of terms. The second is a proprietary algorithm for cover reduction, which eliminates terms covered by one or more terms.

Reduce allows up to 500 auxiliary equations and substitutes the reduced auxiliary expression for each auxiliary variable in subsequent equations. The program allows up to 400 output variables and equations and up to 111 driving variables. A driving variable is either an input variable or an output variable that is also used internally to the logic net. The logic net can contain 64,000 terms. The cover reduction of each equation can contain up to 64,000 associated terms and prime implicants.

Price: \$900

Contact: Cheryl Pankratz
(714) 998-6041

MIDCOM CORP.

1940 N. Tustin Avenue, Suite 117

Orange, CA 92665

RS/1 (The Research System)™

Operating System: MicroVMS, VMS

Keywords: • Data base management • Data conversion
• Graphics • Statistics

RS/1, developed by Bolt Beranek and Newman, Inc., is a generalized data management system that handles the information needs of the research scientist. RS/1 data management features provide data storage and retrieval, data transformation and analysis, graphics, statistical analysis, curve fitting, and analytical models. Users can extend capabilities and tailor the system through a PL1-like structured programming language that is integrated into the data management features. RS/1 can interface to data-gathering systems, data base management systems, and other statistics packages. RS/1 capabilities are accessed through a command language that integrates the system's data management, data analysis, and graphics functions.

DIGITAL distributes this software product under license from Bolt Beranek and Newman, Inc., One Alewife Place, Cambridge, MA 02140.

Refer to SPD #A0.14.xx when requesting further information on this product from your local DIGITAL sales office.

RS/1 (The Research System)™ is a trademark of Bolt Beranek and Newman, Inc.

A version of this product is available for the PDP-11 computer.

Price: \$13,400 - \$32,500

Contact: Consult your local DIGITAL sales office (see Introduction).

RUNREF

Operating System: ULTRIX-32, UNIX* (Berkeley), VMS

Keywords: • Documentation • Medical • Scientific
• Text management

RUNREF, a reference formatting and retrieval program for scientific manuscripts, retrieves citations from a data base, inserts appropriate numbers in text, and produces bibliographies in the punctuation style appropriate for a variety of medical and scientific journals. The programs are written in C.

Citation material is placed in a data base format that allows retrieval by keyword, phrase, author, year, and so on. Citations are given identifying numbers, which may be used in the production of text. The text-formatting program uses the text and data base to then format the text and bibliography. The text will include, for example, superscripted numbers in citation or alphabetical order, according to the bibliographic style required by the publisher or granting agency. Authors' names and year of publication may appear within the text, if desired. Alphabetic or numeric-order listings of the cited bibliographic material are produced in the "references" section in any one of 27 available punctuation styles. Error checking for incorrect input and a 25-page user's guide are available.

The lower price includes documentation for a single user. The higher price is for an annual licensing fee for a multiuser system with automatic updates.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$200 - \$500

Contact: B. Todd Troost, M.D.
(216) 444-3190

DAYSTROM SYSTEMS, INC.
11206 Euclid Avenue, Suite 308
Cleveland, OH 44106

S531A/S631A ABACOS II

Operating System: VMS

Keywords: • Instrumentation • Nuclear • Quality control
• Scientific

The capability and versatility of the three whole-body counting systems — ACCUSCAN, FASTSCAN, and the 2230 (chair) — lie in this application software. ABACOS II, the body-burden analysis software, represents a high level of sophistication for sodium iodide and germanium detector spectra. ABACOS II can quantify up to 30 isotopes in the background-level spectra. ABACOS II is written in FORTRAN IV, allowing it to be easily upgraded as new analysis algorithms are developed or modified for special applications.

Large $4 \times 4 \times 16$ detectors are used. Sensitivities of three nanocuries and better have been obtained for 1-minute counts. Routines for complete body-burden and dose calculations are included.

Although the three units are generally stand alone, ABACOS II can be integrated to an existing computer system with the proper configuration.

A version of this product is available for the PDP-11 computer.

Price: \$10,000 - \$19,000

Contact: Mark Biron

(203) 238-2351

CANBERRA INDUSTRIES, INC.

One State Street

Meriden, CT 06450

SDP-PLUS (Structure Determination Package)

Operating System: VMS

Keywords: • Biology • Chemical • Scientific
• Structural engineering

The Enraf-Nonius Structure Determination Package (SDP) solves and refines molecular/crystal structures. The package runs on different models of DIGITAL PDP-11-series computers with a variety of peripherals. The SDP package is written in FORTRAN IV and runs under RSX-11M or RSX-11M-PLUS. A FORTRAN IV-PLUS version also exists. A minimum of 32KW of user memory and floating-point hardware are prerequisites.

The SDP package includes data reduction, absorption correction, phase determination, Fourier calculation, least-squares refinement, calculation of esds, mapping, plotting, and program listing.

A version of this product is available for the PDP-11 computer.

Price: \$3500

Contact: Dr. Frank van Meurs

31.15.569230 ext. 151

B.V. ENRAF-NONIUS DELFT

Postbus 483

2600 Al Delft

The Netherlands

SHAZAM — A General Computer Program for Econometrics

Operating System: VMS

Keywords: • Forecasting • Mathematics • Statistics

Distribution medium: magnetic tape.

SHAZAM is a general-purpose FORTRAN program that performs econometric and statistical computations. Features include regression analysis; simultaneous equation estimation; principal components; generalized least squares; autoregressive models; probit, logit, and tobit models; distributed lags; forecasting; nonlinear estimation; data manipulation; 2- and 3-stage least squares; and so on.

Price: \$300 – \$500

Contact: Kenneth J. White
(604) 228-5062

UNIVERSITY OF BRITISH COLUMBIA
Department of Economics
Vancouver, British Columbia V6T1Y2
Canada

STAT/PROTRAN

Operating System: VMS

Keywords: • Mathematics • Scientific • Statistics

As a member of the powerful, user-oriented PROTRAN family, STAT/PROTRAN is designed to aid in performing statistical analyses. STAT/PROTRAN has proved extremely effective for statistics and general data management in business, medicine, market research, aerospace, education, finance, agriculture, government, and other fields. Given a few simple commands, the system can quickly generate detailed, accurate statistical analyses in such areas as basic statistics, frequency tables and cross-tabulation, correlation, regression analysis, analysis of variance, and random-number generation.

Price: \$900/yr – \$1400/yr

Contact: Sales Division
(713) 772-1927

IMSL, INC.

7500 Bellaire Boulevard, NBC Building
Houston, TX 77036

TSA (Time Series Analysis)

Operating System: VMS

Keywords: • Forecasting • Numerical analysis • Scientific
• Statistics

Distribution medium: magnetic tape.

This interactive program for the analysis and manipulation of time series data provides for both standard and nonstandard analyses, using spectral and Box-Jenkins approaches. TSA consists of a FORTRAN program of 19,000 lines.

These facilities include calculations of entire series and their transforms, with automatic determination of the time domain of the result. Mathematical and statistical functions and random-number generators are provided. Series may be displayed through ordinary printing, line printer plots, or full graphics. The system also features summary statistics — sample correlation functions (including partial and cross correlations), histograms, and more. Fourier transforms of series give access to spectra and cross spectra. The user controls detrending and tapering. A library of filters, weighted regression with lagged variables, Box-Jenkins model fitting, and forecasting are also featured.

Series manipulations include interpolation, sorting, and concatenation. The system includes file handling, user macros and an internal editor, a variable command format, clean error recovery, and simpler model fitting procedures.

Price: £360 – £780

Contact: M. G. Richardson
+ 44 865 511245

NUMERICAL ALGORITHMS GROUP LTD.
256 Banbury Road
Oxford OX2 7DE
United Kingdom

TSP (Time Series Processor)

Operating System: UNIX* (Berkeley), VMS

Keywords: • Forecasting • Numerical analysis • Statistics

Distribution media: 9-track 1600 bpi magnetic tape.

This system, written in FORTRAN, provides regression, forecasting, and other econometric tools on VAX, DECsystem-10, and DECSYSTEM-20 computers. TSP is easy to use, with format-free user input and convenient data manipulation of time series and cross-sectional data, including full missing-value capabilities. All standard estimation methods are provided, including ordinary least squares, 2- and 3-stage least squares, polynomial distributed lags, regression with first-order serial correlation correction, and estimation of nonlinear simultaneous models by instrumental variable and maximum likelihood techniques.

TSP participates in all phases of model building, such as estimation, equation formation, and model solution by several methods. The Box-Jenkins techniques for forecasting a time-series process are also available. Easy transformation of variables, equation differentiation, matrix algebra, and user-defined procedures make TSP a complete programming language for econometric problems.

Source code and object code are provided, as well as a reference manual and a user's guide.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: \$1200 – \$2200

Contact: Rossannah Reeves
(415) 326-1927

TSP INTERNATIONAL
928 Mears Court
Stanford, CA 94305

WBC (Whole Body Counting)

Operating System: VMS

Keywords: • Instrumentation • Nuclear • Quality control
• Scientific

These systems aid in acquiring, analyzing, recording, and reporting exposure information on internally deposited radionuclides. Each system is a turnkey analytical package consisting of an advanced detector system, a dedicated multichannel analyzer, a complete computer system, a line printer, and state-of-the-art data reduction/analysis software.

Three counter configurations are available. The WBC-6000 closed geometry chair (shadow-shielded) is ideal for accurately determining low levels of internally deposited radionuclides. The WBC-1000 chair is intended for screening large numbers of personnel quickly and effectively. The WBC-7000 screening bed is a flexible system allowing either rapid screening for fast throughput or complete whole body diagnostic counting.

The software automatically calculates the Percent Maximum Permissible Organ Burden (%MPOB) and the Percent Maximum Permissible Body Burden (%MPBB) for each radionuclide in the user's WBC library. Other pertinent parameters are Percent Maximum Permissible Radionuclide Concentration (%MPC-hour), Effective Dose Equivalent, Fifty-Year Dose Equivalent Commitment, and Percent Administrative Limit (%AL). The analysis reports provide information for an effective internal dosimetry program.

Price: \$6000 - \$9000

Contact: Terry Gahl

(404) 434-9889

NUCLEAR DATA, INC.

2734 South Cobb Industrial Boulevard
Smyrna, GA 30080

Sales and Marketing



Bohdan Hrynewych/Stock, Boston

AAAMIS (Advertising Agency's Accounting and Management Information System)

Operating System: ULTRIX-32, UNIX* (Berkeley)

Keywords: • Accounting • Information management • Media

Designed for advertising agencies, AAAMIS supports all advertising functions. Despite its power, AAAMIS is user friendly, fast, and reliable. Its menu-driven format, numerous prompts and messages, help features, error trapping, and sophisticated data backup and recovery procedures make it simple to use even for those with no prior computer experience. AAAMIS is composed of the media processing, production processing, accounts receivable, general ledger, and accounts payable modules.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$3750 - \$12,000

Contact: Joseph Grillo
(617) 965-5059

BETA PRINCIPLES
203 Beethoven Avenue
Newton, MA 01940

Access Marketing Analysis System

Operating System: VMS

Keywords: • Data base management • Decision support
• Graphics • Report writer

Access is a menu-driven, interactive marketing analysis system that integrates internal shipment data with syndicated data sources, such as SAMI, Nielsen, Majers, and NABSCAN. With their presentation-quality charts and graphs, Access reports provide marketing managers with detailed information on assessing promotions, monitoring pricing strategies, double-checking sales forecasts, and managing sales accounts.

The Access Marketing Analysis System is a fully prompted easy-to-use system. Customers may buy Access for in-house use or use it through timesharing.

Price: \$35,000 - \$125,000

Contact: Dale H. Stern
(212) 425-2665
DIALOGUE INC.
19 Rector Street
New York, NY 10006

AIS Sales Order Processing/Invoicing System

Operating System: VMS

Keywords: • Order entry • Report writer • Taxes
• Warehousing

This program provides on-line sales order entry; allocation of inventory; release approval, shipment, and invoice printing; a quick order entry option; a detail order entry option; automatic price calculation; distribution by line item; an inventory accounting option; credit control; commission reporting; sales analysis; tax reporting; on-line update to accounts receivable; and multiple company and multiple warehouse facilities.

Price: Available upon request

Contact: Marketing Department
(415) 444-5954

ARGONAUT INFORMATION SYSTEMS, INC.
383 Grand Avenue
Oakland, CA 94610

ALL-IN-1 System for Sales and Marketing

Operating System: MicroVMS, VMS

Keywords: • ALL-IN-1 • Information management
• Office systems • Sales analysis

Distribution media: 9-track 1600 bpi magnetic tape, RA60, RK07, RL02.

This set of tools to help a sales and marketing organization increase its productivity and effectiveness consists of 10 modules, each of which performs functions related to different parts of the sales cycle:

- Lead Tracking is used to create a record for each new lead that comes into a sales/marketing organization.
- Account and Contact Information is used to create a record for each organization that is, or may become, an account.
- Opportunity Pipeline can be used to create a record for each definite piece of potential business within an existing account.
- Sales Calls is used to store important information about individual sales calls.
- Expense Sheets features a form resembling a financial spreadsheet for recording daily expenses, broken down according to the account and the specific opportunity against which the expenses were incurred.
- Labor Activity, an analog of the Expense Sheets subsystem, tracks time instead of money.
- Personnel Information provides access to key facts about employees.
- Reports and Graphs, providing reports, graphs, and profiles, can be requested in a variety of classifications.
- Background Information consists of files that are necessary for the operation of the ALL-IN-1 System for Sales and Marketing.

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- Training contains the Computer-Based Instruction (CBI) tutorials that are available to teach the user how to use the ALL-IN-1 System for Sales and Marketing.

Refer to SPD 26.80.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$11,000

Contact: Consult your local DIGITAL sales office (see Introduction).

Call Tracker

Operating System: MicroVMS, VMS

Keywords: • Accounts receivable • Data base management
• Scheduling • Telecommunications

Distribution media: 9-track magnetic tape, RL02, RX50.

This telephone history data base and phone dialer keeps track of who to call, when to call, and what was said in past conversations. A review command displays the names of people scheduled for followup. People are selected by interest level, category, follow-up date, time zone, or any combination thereof.

The program is written in DIBOL and uses the standard file support provided by Record Management Services (RMS). Call Tracker can handle as many users as there are terminals. Each user has a dialer that connects between the terminal and the computer. The dialer also attaches to the desk phone and works with standard single- and multiline telephones.

Call Tracker works with AT&T, MCI, Sprint, and most long-distance services; the simple installation takes only a few minutes. Call Tracker is self-teaching, guiding the user with menus and concise, simple messages. The full-screen editor and single-keystroke commands can be learned in the first session.

Each user can have up to eight data bases, including customers, sales reps, company sales people, vendors, or company management. Several users can share a common data base.

This highly interactive program gives telephone history by company or contact name, displays the outcome of past conversations, and dials any one of three contacts with one keystroke. The person's history is temporarily updated with a status — busy, left message, out, or no answer — until he or she is reached. When the person is reached, a history of the conversation is recorded.

The program prints labels, envelopes, and reports. Call Tracker interfaces to the list-processing feature of most word processors.

Each dialer costs \$160. The package comes with a 1-year full warranty.

A version of this product is available for the PDP-11 computer.

Price: \$1500 – \$3850

Contact: Saeed Jalali
(213) 202-0785

ORIGIN, INC.
9136 Gibson Street
Los Angeles, CA 90034

CJ/ADVERTISING™

Operating System: VMS

Keywords: • Accounts receivable • Billing
• Data base management • Media

CJ/ADVERTISING, an on-line menu-driven data base-oriented advertising and contract management system with complete on-line ad rating and comprehensive accounts receivable and reporting capabilities, features ad/insertion order entry (up to 99 per ad order); on-line account/corporate contract cross-reference; complete comparative daily lineage reporting; ad rating and pricing for all space/rate categories, preprints, and advertising types (includes future rate entries); ad/insertion tracking and dummyming by either single or multiple categories of criteria; future ad list and reservation manifest on request; automatic interface to ANPA Layout-80 Dummyming System; full contract management with automatic renewal; automatic classified interface with transient ad billing on expiration and cash receipts capability; and open-item or balance-forward accounts receivable, invoicing, cash receipts, age analysis, and sales distribution.

Price: \$28,000 – \$63,000

Contact: Dave Sloan
(813) 872-9990

COLLIER-JACKSON, INC.
3707 West Cherry Street
Tampa, FL 33607

Cost Estimating

Operating System: ULTRIX-32, UNIX* (Berkeley, System III, System V)

Keywords: • Calculation aids • Decision support
• Manufacturing

This fully integrated on-line multiuser UNIX*-based cost estimating system prompts the user for information and calculates estimated costs by operation. An estimate confirmation can be printed and held pending customer approval. On receipt of customer order, the order can be compared to the estimate, which can be revised as necessary. The detail from the estimate becomes the starting point of "estimate versus actual" comparison in the Job Costing system. The Cost Estimating system can be integrated with the Job Costing system. Management

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reports can be produced using the information from the estimating system, such as analysis of open estimates by customer, salesperson, and product type; and comparison of "estimates versus orders" by customer, salesperson, and product type.

Also available are a print key providing hard copy of any screen image through the system printer, true multiuser design for concurrent program use, built-in multicompany/multidivision support, and a user-assigned predefined company/division or user-allowed option to specify company/division. Timely information is assured through the automatic updating of G/L from all modules.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Laurel McDaniel
(312) 332-3242

NEAL NELSON & ASSOCIATES
185 N. Wabash, Suite 1908
Chicago, IL 60601

Customer Response Center®

Operating System: UNIX* (Berkeley, System III, System V)

Keywords: • Mailing lists • Order entry

This system supports the marketing activities of small to medium-size marketing departments and enables marketing or customer service personnel to enter, review, and modify information about interactions with customers and prospective customers. Product inquiries, orders, shipments, and warranty service can be handled. Form-letter merge, mailing labels, and special attention reports are also featured.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$2500 - \$10,000

Contact: Vern Pang
(714) 978-1212

INFORMATION MANAGEMENT ASSOCIATES, INC.
1437 W. Palmyra
Orange, CA 92668

Datacode® Sales Analysis

Operating System: VMS

Keywords: • Sales analysis

Memory required: 128K.

The Datacode Sales Analysis module, written in COBOL or RM/COBOL, integrates with the Order Processing system to provide comprehensive sales information on a timely basis. Customer history, maintained for the last 13 periods and last 3 years, is made up of total units, sales, and cost amounts for each customer. A 12-month history file is also maintained for sales by product and customer.

Reports are provided for product sales history — year to date and last 12 months — customer sales history — year to date and last 12 months — and history for the last 12 months or year to date by customer, item, salesperson, agent, warehouse, product category, and territory. Reports may be printed with or without cost information. Customer sales history reports may be printed in any of three sequences: by customer number, in alpha sequence, or in alpha sequence within sales territory.

Price: \$5000 – \$10,000

Contact: Al K. Margis
(416) 625-1037

RAUS COMPUTER SYSTEMS LTD.
1945 Dundas Street East, Suite 213
Mississauga, Ontario L4X 2T8
Canada

Direct Marketing and Mail Order Management System

Operating System: VAX DSM, VMS

Keywords: • Data base management • Management
• Presentation aids

This series of modules demonstrates our special expertise in tailoring and designing direct marketing and mail order management systems. We implement direct mail and catalog systems, continuity programs, direct response advertisement, and package inserts.

A customer usually retains us first to produce customized specifications, which are then translated into an operational system.

A version of this product is available for the PDP-11 computer.

Price: \$15,000 – \$100,000 +

Contact: Alexander J. Phillips, President
(201) 256-7633

INTERACTIVE SYSTEMS AND MANAGEMENT CORP.
1500 Cardinal Drive
Little Falls, NJ 07424

DTRO Forecasting System

Operating System: MicroVMS, VMS

Keywords: • Distribution • Forecasting • Manufacturing
• Sales analysis

This system, written in COBOL, makes forecasts based on the "exponential smoothing" method, a type of weighted averaging, and features:

- Initial forecasts and associated factors created by a program that places them directly on file
- Running the initializing program as a simulation or a test, during which optional graphs and other printed output may be produced, or as a production run to update files
- Periodic updating as new data becomes available
- Special computation for slow-moving, seasonal, and trending items
- Demand filter and tracking signal calculations
- Specifying either full printout or exception output

The approach has been tested on more than 900,000 items in five major firms, with proven accuracy. The Forecasting System is fully documented, with full support available for installation, training, consulting, and customizing.

A version of this product is available for the PDP-11 computer.

Price: \$5000 - \$10,000

Contact: Bill Benton

(415) 861-5454

DTRO SOFTWARE

1229 7th Avenue

San Francisco, CA 94122

FUTURETECH — Mail Order Processing System

Operating System: MicroVMS, VMS

Keywords: • Inventory • Mailing lists • Order entry

This complete processing system for companies in the mail-order industry is written in COBOL 74. The 12-module system provides on-line tracking of orders from original entry through return of goods for refund or exchange. Inventory levels are updated in real time and are committed to orders at the time of entry. Customer credit is checked at order entry and again before shipping goods. Other features are automatic creation and release of back orders, processing of debit and credit memos, automatic calculation of taxes and freight charges, and compliance with FTC notification requirements. Important features are marketing and merchandising reports and reports for the accounting and finance departments, facilitating growth in order volume without requiring comparable growth in personnel.

Complete implementation support includes technical and user training, system and user documentation, program source code, and a 1-year warranty. Up to three months of installation and training time is included. Thereafter, a choice of maintenance agreements can be arranged.

This system is recommended for companies handling 40,000 to 1 million orders annually. Free demonstrations can be arranged.

A version of this product is available for the PDP-11 computer.

Price: \$25,000 - \$80,000

Contact: Robert J. Gaudet

(617) 893-2270

LESIFCO, INC.

80 Trapelo Road

Waltham, MA 02154

ICBM (Interactive Computer-Based Marketing) System

Operating System: VMS

Keywords: • Data base management • Mailing lists
• Sales analysis • Telecommunications

Memory required: 2MB.

This full-cycle teletargeting system turns prospects into customers and continually tracks their preferences, characteristics, and status with target mailings, response recording, and analysis of data base attributes. ICBM can generate mailing lists on the basis of extract criteria and can be the basis for telemarketing activities, sales information routing, form letters, and trend analysis.

The system can handle millions of records, with up to 5000 attributes for each record. Bit-mapped techniques provide high-speed data searches and efficient storage. Data can be loaded by an overlay-driven interface system to read in ASCII or EBCDIC files from other systems. The interface has a variable merge-purge algorithm that compares record input from different systems and discards those that fall under an adjustable statistical definition of duplicates.

The user defines the attribute set for the particular business, as well as the criteria for extracting the data. The system extracts and analyzes at a rate of 1500 entries a minute and has a request library. The selection criteria may contain variables, combinations of attributes or ranges, and any criteria.

Data acquisition can be accomplished by bar code entry, network, tape, disk, reader interest cards, automated extracts, remote telephone access, or manually. Sources of data can be purchased mailing lists, company invoice data, customer order information, customer and prospect files, and more.

The menu-driven system has interactive help messages, an editor for system tables, and code validation. Programs are written in VAX-11 BASIC and are fully documented. The system is delivered on VAX-compatible tape with user and system documentation. The purchase price includes 24 hours of install/training time. Comprehensive classroom training is available at the customer site. A yearly maintenance contract is available.

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Price: \$35,000 – \$75,000

Contact: Robert J. Henslee
(617) 851-4301

ADVANCED MANAGEMENT SERVICES INC.
Main Street, P.O. Box 254
Wakefield, MA 01880

MANMAN/OMAR

Operating System: VMS

Keywords: • Accounts receivable • Billing • Order entry

MANMAN/OMAR, for order management and accounts receivable, is an interactive menu-driven product that manages a customer's orders from order entry until payment. The 5-module product — Sales Order Entry, Shipping/Invoicing, Accounts Receivable, Cash Receipts, and Sales Analysis — handles order entry through customized prompts and prints sales orders, shipping documents, and invoices. MANMAN/OMAR performs on-line credit checks at order entry. Inventory backlog is posted to MANMAN's manufacturing product and relieved at shipment. The product monitors bookings and sales by product, product type, customer, and salesperson; processes multiple commissions; and maintains a historical sales data base.

Price: \$30,000

Contact: Carol Singh, Corporate Communications Coordinator
(415) 969-4442 ext. 4152

ASK COMPUTER SYSTEMS INC.
730 Distel Drive
Los Altos, CA 94022

Marketab®

Operating System: ULTRIX-32, UNIX* (System V), VMS

Keywords: • Data collection • Forms management
• Sales analysis • Statistics

Marketab facilitates fast, accurate, and systematic processing of questionnaires and other survey data and is used by the market research industry, advertising agencies, financial institutions, and tabulation service bureaus. Marketab's three principal phases with supporting utilities cover every aspect of the processing of survey data, from the initial editing of raw data, through any required adjustments, to the final tabular printouts.

Marketab can process any data file, including multipunched (column binary) data. Comprehensive editing eliminates inaccuracies. Final tabulations are formatted to meet management requirements. Because tabulating can be done on an in-house basis, security is ensured. The tab system produces table and page numbers, plus a complete table of contents. Survey tabulations from multiple-wave studies may be combined into a single report without retabulation. Market tabulations are formatted for ease of reference.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$40,000 - \$50,000

Contact: Harold Zawadski
(203) 853-7511

MNEMONICS, INC.
280 Connecticut Avenue
Norwalk, CT 06854

MBS-SA (Manus Business Systems — Sales Analysis)

Operating System: VMS

Keywords: • Financial analysis • Management • Report writer
• Sales analysis

The MBS Sales Analysis module provides reports to aid in the evaluation of individual customer, customer groups, territories, salespeople, and product sales activity. Reports on percent profit and profit dollars can be used by management to make decisions about marketing strategies for various product categories.

Used as a management tool, the Sales Analysis module produces information to detect complex sales trends (thus providing a basis for determining competitive activity), to perform market-share analysis, and to improve the efficiency of sales personnel. In addition, product activity information can be obtained by product classification for a specified demand period. Depending on the amount of historical data available on the demand-period increments, the sales analysis information can help reduce inventory levels that increase stock turnaround. A current and prior year-to-date history file is used for producing reports.

The Sales Analysis module captures and accumulates sales history data as a result of invoicing in the MBS Order Processing module. The module also recaps pertinent activity of the MBS Sales Accounting subsystem.

A version of this product is available for the PDP-11 computer.

Price: \$3000 - \$6000

Contact: Gary Vowels
(206) 285-3260

MANUS SERVICES CORP.
1700 Westlake Avenue North
Seattle, WA 98109

Merlin Tabulation System

Operating System: MicroVMS, ULTRIX-32, VMS

Keywords: • Data base management • Data collection
• Data entry • Presentation aids

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This applications system, codeveloped by the TABSHOP, London, is used for data input, validation, cleaning, tabulation, manipulation, presentation, and storage/retrieval. The system was originally intended for the market research supplier organization processing large numbers of customized tables each day based on survey or questionnaire data. MERLIN's flexibility in manipulating tables to produce more complex tables has led to its use in business (sales) analysis, advertising research, and other areas requiring large amounts of data to be processed and reported.

MERLIN can be run on line or in batch. MERLIN allows modular operation so that a prior step can be reexecuted without starting the entire process all over again. Thus, the user can add new data to data files and tables, build new tables from existing ones, access previously created tables, and do ad hoc tabulations with the user-friendly MERLIN interactive subsystem.

Price: \$10,000 - \$30,000

Contact: Dr. Michael C. Stentz
(609) 921-6098

DATAN INC.

Research Park, 2 Wall Street
Princeton, NJ 08540

MMS (Marketing Management System)

Operating System: VMS

Keywords: • Forecasting • Sales analysis

This program for sales and marketing executives produces individualized form letters for inquiry response, tracks leads, generates sales forecasts by product and salesperson, analyzes cost effectiveness, and incorporates telemarketing aids. MMS runs on personal computers, as well as on mini- and mainframe models, and the right information in the needed form can be viewed on the monitor or printed as a report. The program incorporates labels for preprinted call sheets and preprinted labels for the sales call report form to forward to the field sales force. The product frees creative marketing people from the drudgery of routing information collection, classification, and storage/retrieval before they can produce the reports, forecasts, and tools needed to plan and implement sales campaigns.

Price: \$2200 - \$10,500

Contact: Donna Brock
(603) 823-5587

JEB SYSTEMS, INC.

57 Main Street, P.O. Box 70
Franconia, NH 03580

Omnitrac**Operating System:** VMS**Keywords:** • Data base management • Information management
• Report writer

Omnitrac, written in C, is an integrated on-line system that acts as a central file for storing, updating, manipulating, and accessing customer base or product information. The system combines a rolodexlike customer listing facility with detailed customer data files, a daily planner, and comprehensive data analysis and report-generation capabilities. Omnitrac enables the user to efficiently track and use sales and marketing data. The multiuser system features data security, an icon menu, and help facilities.

Price: Available upon request**Contact:** Gary M. Kuba
(617) 937-8500INTERACTIVE SYSTEMS, INC.
600 Suffolk Street
Lowell, MA 01854**Order Entry Processing****Operating System:** VMS**Keywords:** • Accounting • Distribution • Inventory
• Order entry

This sales order processing software for tracking orders, backlog, and sales activity may be operated independently or as part of an integrated package that includes accounts receivable, accounts payable, general ledger, payroll, job cost accounting, and inventory control. The program provides fully interactive processing; table-driven input data specifications, allowing you to decide what data to maintain for each sales order and each line item; table-driven reports with user-specified format and contents; and full integration with accounts receivable so that orders are automatically marked shipped and backlog is automatically reduced when invoicing is done.

A version of this product is available for the PDP-11 computer.

Price: \$4000 +**Contact:** Janna McMillan
(617) 275-5810BREUER & CO.
54 Middlesex Turnpike
Bedford, MA 01730**Perspective/700 Sales Analysis****Operating System:** VMS**Keywords:** • Sales analysis

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Perspective/700 Sales Analysis reports highlight the most profitable products, your best customers, and the best sales representatives:

- The Customer Sales Analysis report includes month, year, previous-year comparison, and gross margin.
- The product Class Sales Analysis covers month and year-to-date comparison, unit and gross sales, and gross margin.
- The Salesperson Sales Analysis reports on product class; month, year-to-date, previous year and quota comparison; and gross margin.
- The Sales Territory Recap provides a salesperson summary; product class; month, year-to-date, previous year and quota comparison, and gross margin.
- The Item Sales History shows 12 months of rolling history, unit sales, and sales ranked by sales volume.

A version of this product is available for the PDP-11 computer.

Price: \$2000 - \$5000

Contact: Michael B. Andelman, President
(312) 953-2220

LIOCS CORP.

246 E. Janata Boulevard

Lombard, IL 60148

PREACT

Operating System: VMS

Keywords: • Computer-aided instruction • Decision support
• Education • Research

Distribution medium: 9-track 800 bpi magnetic tape.

This program, written in BASIC, helps users produce a questionnaire for predicting and analyzing behavior. Based on Ajzen and Fishbein's Standard Questionnaire (I. Ajzen and M. Fishbein, *Understanding Attitudes and Predicting Social Behavior*, Prentice-Hall, 1980), the program provides heading advice and examples, generates items from input, and adds standard items automatically. Options are provided for varying item construction. The questionnaire is recorded as a file that can be edited.

PREACT is supported by three satellite programs: PREPRI, which improves the copy by underlining; PRINTQ, which prints the questionnaire in an enhanced form on an Epson FX80; and ENACT, which presents items on the screen for response, checks the response range, and accumulates a data file.

Supporting literature is available.

Price: \$250

Contact: Dr. Robert East

(1) 549-1366 ext. 431

KINGSTON POLYTECHNIC

Penrhyn Road

Kingston KT1 2EE

England

PROS (Prospect, Letter, and Sales Facility)

Operating System: VMS

Keywords: • Data base management • Office systems
• Report writer • Sales analysis

This software package includes data entry for letter, prospect, and sales information and data base inquiry and maintenance. PROS also generates personalized letters, customized labels, and comprehensive reports. This package requires the following "SYSGEN" parameters: alphabetic month and a minimum of two pseudokeyboards.

PROS is designed for high efficiency and ease of use for the small business, corporate division, or institution. Using this facility for mailing and storing prospect/customer correspondence greatly enhances sales efficiency.

A version of this product is available for the PDP-11 computer.

Price: \$8000

Contact: Carolyn Clyde

(801) 224-5306

CLYDE DIGITAL SYSTEMS, INC.

P.O. Box 4500

Provo, UT 84603-4500

RealWorld™ Sales Analysis

Operating System: ULTRIX-32, UNIX* (Berkeley)

Keywords: • Financial analysis • Office systems • Point of sale
• Sales analysis

This system locates areas of increasing or decreasing sales and allows analysis of the components vital to increasing revenues. Data from this system assists in formulating marketing and sales strategies.

The system features sales analysis by customer, customer type, customer sales volume, responsible salesperson, state, item, item category, and item sales volume and also includes password protection.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$795

Contact: Larry Wilber
(603) 798-5700
REALWORLD INC.
Dover Road
Chichester, NH 03263

Sales Analysis

Operating System: ULTRIX-32, UNIX* (Berkeley, System III, System V)

Keywords: • Manufacturing • Property management
• Report writer • Sales analysis

This fully integrated on-line multiuser UNIX*-based sales analysis system allows reports to be prepared in either detail or summary form, based on orders, shipments, invoices, or cash receipts. Reports are available by part number, product category, customer, customer type, state, region, zip code, and salesperson. Cross-reference files by customer, vendor, product, account, and document allow most reports to be run without having to sort. Reports prompt for a range of fields, so individuals or groups of customers or products can be printed. Reports can compare actual amount against budgeted amount for sales, orders, cash receipts, and so on. Future orders can be entered, and revenue forecasting reports can be generated. Commissions may be calculated at time of order, invoice, or cash receipt. Calculated commissions may be posted automatically to either A/P or payroll systems, if desired.

Also available are a print key providing hard copy of any screen image through the system printer, true multiuser design for concurrent program use, built-in multicompartment/multidivision support, and user-assigned predefined company/division or user-allowed options to specify company/division. Timely information is assured through the automatic updating of G/L from all modules.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Laurel McDaniel
(312) 332-3242
NEAL NELSON & ASSOCIATES
185 N. Wabash, Suite 1908
Chicago, IL 60601

Sales Lead Tracking

Operating System: ULTRIX-32, UNIX* (Berkeley)

Keywords: • Report writer • Sales analysis

This system allows the user to do all fulfillment from direct mail campaigns, advertising campaigns, and so on. The system generates reply letters to prospects, lead reports for salespeople or dealers, and produces a series of reports that analyze the effectiveness of ad campaigns. A complete data base of all leads and lead activity is maintained. The Sales Lead Tracking system is written in C language and uses the public domain Ingres data base written by the University of California at Berkeley. Binary and source codes are available for UNIX* Berkeley 4.1 and 4.2. The source code is available for all others.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: \$3000

Contact: Fred Potthoff

(612) 941-9470

FARGO ELECTRONIC SERVICES, INC.

7150 Shady Oak Road

Eden Prairie, MN 55344

SalesMate®

Operating System: UNIX* (System V)

Keywords: • Information management • Networking
• Sales analysis • Telecommunications

This integrated system provides timely information for sales/marketing management. The system consists of portable notebook-size and battery-operated microcomputer workstations; user-friendly applications software for following every aspect of the selling process; an automatic dial-up communications network linking the workstations to the home office; and a Sales Information Center minicomputer, which acts as the hub of the network and processes information requested and input by the sales representative.

The system can be rented for \$120 to \$200 a month.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$3000 - \$6000

Contact: Robert F. Warn

(617) 890-1444

ENVOY SYSTEMS CORP.

1432 Main Street

Waltham, MA 02154

SCOUT Auftragsbearbeitung

Operating System: VMS

Keywords: • Billing • Order entry • Wholesale

This product for customer order processing and invoicing is configured for German-speaking users in Austria, Germany, and Switzerland.

Price: Available upon request

Contact: Rainer Burken

(0761) 70799

DATANORM SOFTWARE GMBH

Kronenstr. 2-4

7800 Freiburg

West Germany

SEARCH/PURGE — Mailing List Deduplication Program

Operating System: MicroVMS, VMS

Keywords: • Forms management • Information management

• Mailing lists • Office systems

This BASIC program eliminates duplicates in a premerged and sorted mailing file. The program uses a unique detection method to identify duplicates without increasing the overkill factor. The input file is sequentially purged of duplicates, resulting in an output file of unique names and a file containing all sets of duplicates. A third output file contains results of the operation, including input count and a matrix summarizing duplicates by "list key."

The format for the input file is flexible, since the user specifies the column locations for name, address, mailing zone (Zip), and list code identifier. Data fields displayed in the report of duplicates are specified in the same manner. The format of the output file of unique names is identical to that of the input format.

SEARCH/PURGE provides clear, easy-to-follow documentation and operator instruction. The price includes installation assistance, with 30 days of maintenance support.

Depending on mailing activity, savings from the use of SEARCH/PURGE can rapidly pay back the initial investments. For example, eliminating 5% of the duplicates from a 30¢ self-mailer of 100,000 pieces will save \$1500.

A free trial test run can be arranged for a list of up to approximately 50,000 names.

A version of this product is available for the PDP-11 computer.

Price: \$5000 — \$7500

Contact: Robert J. Gaudet

(617) 893-2270

LESIFCO, INC.

80 Trapelo Road

Waltham, MA 02154

STATUS

Operating System: VMS

Keywords: • Accounting • Forecasting • Sales analysis

This sales tracking and analysis system provides sales call-up, sales follow-up, and call forecasting with word processing interaction. The system responds to inquiries with current information, anticipates and initiates call notices, forecasts future periods, and levels work loads. Sales dates are automatically maintained by customer contact and reason for follow-up. All customer characteristics are captured and updated through a series or customized program. Output includes entries to order entry, invoicing, accounts receivable, payroll, and general ledger files and product line, product sales, and commission calculation reports. The system automatically maintains information for promotional mailing, telephone management, word processing, sales reporting, and territory tracking.

STATUS is best suited to sales or marketing organizations or sales departments in small and medium-sized companies.

A version of this product is available for the PDP-11 computer.

Price: \$1500 - \$3600

Contact: Michael W. Rohrbach
(617) 235-8830

INTERNATIONAL MARKET RESOURCES, INC.
38 Garden Road
Wellesley Hills, MA 02181

TOLAS-SA (Sales Analysis)

Operating System: VMS

Keywords: • Billing • Forecasting • Report writer
• Sales analysis

This interfacing software and historical data base extracts and maintains information from customer sales invoices. Reports and inquiries are available for customer, product, and salesperson analysis, monthly trends calculation, sales forecasting, and comparative reporting. A special VAX-to-PC interface can transfer either raw or processed data from TOLAS files to personal computers for analysis, reporting, and graphing by LOTUS 1,2,3 or other MS-DOS-based software. TOLAS Sales Analysis is written in native-mode VAX BASIC using DIGITAL standard RMS.

TOLAS is available on a turnkey basis or as add-on software on existing DIGITAL computers. Included with the software license are standard system specifications, program sources and documentation, users' manuals, and a 3-month warranty. Available at additional cost are systems analyses and customer specifications, package modifications, custom documentation, data conversion, user training, and extended warranty and support services.

A version of this product is available for the PDP-11 computer.

1528 Sales and Marketing

Price: \$3000 – \$6000

Contact: Allen L. Pinkus
(412) 963-6770

TRANSCOMM DATA SYSTEMS INC.
1380 Old Freeport Road
Pittsburgh, PA 15238

TOPAZ Sales System

Operating System: VMS

Keywords: • Inventory • Order entry • Sales analysis

The Sales System consists of the Sales Analysis, Order Entry, and Inventory Control packages:

- Sales Analysis focuses on the customer, the product, and the sales representative and enables management to determine where to reduce/allocate emphasis and resources.
- Order Entry provides a computer-assisted method of identifying customer and product information. The customer's record can be retrieved by telephone number, account number, or name.
- Inventory Control categorizes inventory as available, allocated for orders, or on back order. Reorder quantity, reorder point, lead time, and warehouse-limit values help management determine when to place an order for resupply of a product. Management can inquire into products on back order, below or at reorder level, or at a percentage of the warehouse limit.

Since product unit sales are kept for a 2-year period, the system can accommodate trend analysis. Reports include an inventory turnover report, a monthly inventory valuation report, an overstocked-inventory report, a product price list, and a detailed listing of products on back order.

TOPAZ Inventory Control can accommodate a number of inventory costing techniques, including FIFO, LIFO, and weighted average.

Price: \$12,000

Contact: Sales Department
(201) 884-0892

INTEGRATED SYSTEMS, INC.
170 Algonquin Parkway, P.O. Box D
Whippany, NJ 07891

Service Industries



Black Star Publishing Company/Albert Steiner

Abax Rental Management System

Operating System: VMS

Keywords: • Accounts receivable • Inventory • Maintenance
• Point of sale

This system is designed to fully automate a wide variety of rental firms. Consisting of accounts receivable, inventory control, and depreciation (other accounting applications are also available), the system may be used either at the rental counter or strictly in after-the-fact accounting of business activity — or both.

Highlights of the system begin with contract entry, which uses reservations, messages, kits, volume discounts, and customer scanning by name or category. Pricing of both rental and sales items is accomplished through a unique system that allows up to six prices for each inventory item, based on time, quantity used, 1-time charge, or any other pricing unit required. The codes can be selected from an unlimited number built to define specific pricing needs. In addition to contracts, the system provides several useful management and accounting reports.

A version of this product is available for the PDP-11 computer.

Price: \$9500 – \$13,500

Contact: Charles R. McKown, President
(316) 663-5041

ABAX COMPUTER SYSTEMS
P.O. Box 1097
Hutchinson, KS 67504

ABC/Equipment Data and Repair History System

Operating System: MicroVMS, VMS

Keywords: • Cost accounting • Maintenance • Manufacturing

This system, written in COBOL, is used in manufacturing, processing, utility and industrial plants, public works, schools, hospitals, and service businesses. The on-line system works equally well on mainframes, minis, micros, and time-share systems. The system facilitates planning and repair work by showing the nameplate data of the equipment, the cost and time for repair labor, the spare parts required, and the cause of failure. Historical information necessary to upgrade all types of equipment through failure analysis is provided. The equipment data card is available on line on a CRT or in printed form, showing the nameplate data, the operating characteristics, the spare parts, the stock numbers, and the interchangeability of an item. The equipment history record is available on a CRT or on a printout, showing a complete repair history for each piece of equipment, the dates of repairs, the work-order numbers, the priority, and the reason for failure.

A version of this product is available for the PDP-11 computer.

Price: \$11,000

Contact: V. W. Ruskin

(604) 682-3808

ABC MANAGEMENT SYSTEMS INC.

805 Dupont Street, Suite 3

Bellingham, WA 98225

ABC/PM Preventive Maintenance System

Operating System: MicroVMS, VMS

Keywords: • Maintenance • Manufacturing

ABC/PM, written in COBOL, provides preventive-maintenance management in manufacturing processing, utility and industrial plants, oil and gas, public works, hospitals, schools, and service and repair shops. The system's eight ANSI COBOL programs require a maximum of 64K and run on all major mainframes, minis, micros, or remote time-share systems. ABC schedules PM tasks and when and what to inspect and automatically follows up overdue PM inspections. PM work orders give detailed instructions, including department, cost center, location, and space for actual values. Overdue PM inspections are tracked and listed by the number of weeks overdue and by department. PM inspection summary shows management which inspections were missed and which resulted in repair work orders. Training seminars for maintenance supervisors and personnel are available and sponsored by SME (Society of Manufacturing Engineers) and various universities.

A version of this product is available for the PDP-11 computer.

Price: \$15,000

Contact: V. W. Ruskin

(604) 682-3808

ABC MANAGEMENT SYSTEMS INC.

805 Dupont Street, Suite 3

Bellingham, WA 98225

Culinary Operations Information System

Operating System: ULTRIX-32

Keywords: • Information management • Inventory
• Warehousing

This software, designed for the multiunit food service operation, provides inventory control over a central purchasing commissary and various outlets in its network. Various food service operations and lounges with many types of food can be accommodated. The system reports by location and by type of business. The reporting period can be defined to the period of operation — one week, one month, one quarter, one year. A user's guide and documentation are included.

A version of this product is available for the PDP-11 computer.

Price: \$6500

Contact: Bob Ginn

(901) 767-3759

INDUSTRY SOFTWARE SALES, INC.

P.O. Box 240804

Memphis, TN 38124

Dispatch

Operating System: VMS

Keywords: • Information management • Maintenance

This simple-to-operate, menu-driven system handles many of the time-consuming tasks of a field service organization. The system handles service calls from the initial service request through call close-out.

Dispatch allows the dispatcher to retrieve client and machine information, record a service request, and dispatch a field engineer within minutes of taking the call. Additional features include the updating of parts inventory, tracking receivables, and issuing invoices.

Dispatch may be customized to suit a client's needs. Many components of the system are, however, applicable to any service business.

A version of this product is available for the PDP-11 computer.

Price: \$20,000 - \$150,000

Contact: Richard Bowe, Marketing Manager

(603) 898-7000

ASA INC.

3 Speen Street

Framingham, MA 01701

fieldwatch™

Operating System: MicroVMS, VMS

Keywords: • Billing • Information management • Inventory
• Maintenance

This total systems solution for field service management organizations consists of three main modules:

- **DISPATCH-PLUS™** matches a customer-reported equipment problem with a qualified field technician. DISPATCH-PLUS features on-line access to the equipment base, including model, type, and serial number; a complete service history; a record of hours, parts, and miles used; a record of repair and trouble codes and other data; a real-time clock that tracks service calls for contractual commitments; multiple search key options; a subsystem that contains information about each call; and automatic scheduling of preventive maintenance.
- **LOGISTICS-PLUS™** features a closed-loop parts-tracking system that determines the location of a part, order entry procedures, back orders, on-line stock status, hard-copy inventory sheets, trial reconciliations, audit trails, management reports, and more.

- **BILLING-PLUS™** provides revenue and cost information for the service base. Integrated with the other two modules, **BILLING-PLUS** features the ability to separate main sources of service revenue, service call billing, contract billing, and part sales. The system provides information on the profitability of each function. Different rates for service areas and equipment types can be changed by modifying the parameter file.

These modules may be purchased separately. Source code is available. The systems are written in COBOL.

Price: Available upon request

Contact: S. M. Gotsis

(617) 863-0400

DATA GROUP CORP.

80 Hayden Avenue

Lexington, MA 02173

Grocery Management System

Operating System: VMS

Keywords: • Distribution • Facilities management • Inventory
• Point of sale

This easy-to-operate, economical, and comprehensive management and analysis system improves profit and reduces overhead expenses. The system consists of seven interactive programs for the grocer.

- The Grocery Inventory System is a simple, easy-to-operate inventory program that allows your staff to post and maintain inventory.
- The Check-Cashing System is an easy-to-operate name and address package that allows your staff to handle your check-cashing data and to retrieve check-cashing information at the check-cashing booth.
- Ad Analysis helps the chain and the independent grocer determine gross profit based on the amount of products sold at given retail prices.
- Cutting Test Analysis determines the best cutting methods and product superiority and sets retail prices that maximize gross profit.
- Balanced Buying maximizes profit and minimizes overbuying, therefore reducing waste and shrinkage. By inputting the estimated sale amount of each retail cut, the program will estimate how many boxes of primal cuts to buy and how to cut them. Reports are based on your cutting tests, starting with the highest percentage margin tests.
- The program for mixing ground beef shows ways to make ground beef, the mix ratio for any lean content, and the cost for each pound for each lean content.
- Boxed Cattle versus Primal Cuts determines the cost effectiveness of buying boxed cattle versus primal cuts.

A version of this product is available for the PDP-11 computer.

Price: \$1500 - \$20,000

Contact: William R. Paschal, Jr.
(405) 843-7323

DATATEK CORP.

818 N.W. 63rd

Oklahoma City, OK 73116

Hospitality Management System

Operating System: VMS

Keywords: • Accounting • Information management • Payroll

This system, written in DIBOL, handles integrated reservations, guest accounting, and back-office accounting for the hospitality industry. The system provides security and an audit trail of all information, as well as comprehensive management reports to help manage hotel operations.

The front desk guest accounting features individual and group reservations, guest checkin and checkout, guest and room status, guest history, advance deposits, and package plans. The back-office accounting features accounts payable, a call accounting interface, a point-of-sale interface, hospitality general ledger, city ledger receivables, a night audit, travel agent accounting, hospitality payroll, cashier, and housekeeping.

A version of this product is available for the PDP-11 computer.

Price: \$10,000 - \$25,000

Contact: Gary L. Bennett
(801) 484-4496

COMPUSOLV

391 Ironwood Drive

Salt Lake City, UT 84115

Job Shop Management

Operating System: VMS

Keywords: • Accounting • Inventory • Sales analysis
• Shop floor control

Distribution media: RL02, RX01, RX02.

This package, designed for any business that needs to track inventory, job costs, sales orders, and purchase orders, provides full business-management functions, including accounts receivable, accounts payable, payroll, and general ledger.

When a new order is entered with individual line-item prices, the billing process and job-cost mechanisms are initiated. Budget-to-actual and profit-percentage information is available with detail by cost categories and cost budgets.

When stock transfers are initiated, the necessary inventory is automatically reserved to complete the job. The inventory cost is transferred specifically to each job. An update of inventory levels is automatic, and a record of all inventory transfers is maintained.

Purchase orders are generated either for a specific job or to replenish stock. The accounts payable is directly interfaced with the purchase order system to verify cost and receiving information. Discrepancies between purchase order amounts and invoiced amounts are flagged.

Partial billing is provided, as well as accounts receivable aging. Sales information by salesperson, customer, and product category is available. Commissions due, based on job cost versus sell price, are calculated when payment is received.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Dwight Johnson
(303) 574-8086

PROFESSIONAL COMPUTER SERVICES
2345 N. Academy Boulevard, Suite 209
Colorado Springs, CO 80909

LEASEPAK

Operating System: VMS

Keywords: • Accounting • Banking
• Information management • Real time

LEASEPAK, a lease accounting and management system for the equipment or auto lessor, features state-of-the-art hardware and software. LEASEPAK features handle lease rate types, including level yield, rule of 78ths, straight line, and simple fixed and floating; cycle billing, regular or irregular payment schedules, consolidated billings, and open-item invoicing; complete state, county, and city sales tax; property tax; federal highway-use tax collection and reporting; complete ITC and all types of depreciation accounting and reporting, including depreciation and ITC recapture; comprehensive reporting, including delinquency, collateral status exception, insurance follow-up, management, and audit control reports; and amortization schedules that include the effects of a loan payment as well as ITC and depreciation for the lease.

Eight additional optional modules are also available and can be integrated into the core system with no restructuring: lease application and document tracking, collateral follow-up, portfolio participation, collection tracking, maturing leases tracking, loss accounting tracking, forecasting, and service bureau relicensing.

LEASEPAK software is tamperproof and offers comprehensive audit and security controls.

1536 Service Industries

Price: \$35,000 – \$137,000

Contact: Cheryl Vanderwiell
(415) 348-0650

MCCUE SYSTEMS, INC.
330 Primrose Road, Suite 212
Burlingame, CA 94010

MANMAN/SERVICEMAN™

Operating System: VMS

Keywords: • Cost accounting • Maintenance
• Materials handling • Statistics

This interactive menu-driven product manages job reporting, service contract maintenance, material requisitioning, and costing for parts that require service. The 4-module product — Job Reporting, Service Contract Maintenance, Material Requisitioning, and Service History and Statistics — prioritizes jobs for out-of-action equipment and provides reports on labor bookings by engineer, job, and contract. The product maintains contract, site, and equipment relationships; provides on-line inquiry to parts availability; and automatically validates part numbers and inventory locations. Unfilled requisitions are automatically backordered.

Price: \$20,000

Contact: Carol Singh, Corporate Communications Coordinator
(415) 969-4442 ext. 4152

ASK COMPUTER SYSTEMS INC.
730 Distel Drive
Los Altos, CA 94022

Oil Burner Service/Inventory

Operating System: VMS

Keywords: • Cost accounting • Inventory • Maintenance
• Petroleum

This application software addresses the most demanding areas of burner service. From the moment the customer calls and a work order is requested, the system can track the progress of that work order until completion, ultimately producing multiline invoices showing (at the user's option) reasons for call, parts used, work done, prices, taxes and amount due, as well as special messages. The parts inventory aspect of the package keeps track of quantity, tracks costs, automatically prices the invoice, and excludes charges for parts and/or labor covered by service contracts. Although the information posted to the system is entered in abbreviated format (defined by the user), the system maintains a complete history of those calls in clear English on each account for several years. Management reports include Profit by Customer, Parts Usage by Mechanic, and Overall Department performance. Automatic cleaning tickets and contract renewals are also accommodated.

A version of this product is available for the PDP-11 computer.

Price: \$10,000 - \$20,000

Contact: Bruce A. Bott, President
(201) 584-4026

ADVANCED DIGITAL DATA, INC.
354 Route 206
Flanders, NJ 07836

RIM (Relationship Impact Model)

Operating System: MicroVMS, VMS

Keywords: • Health care • Information management • Medical
• Mental health

This computerized social service system provides for the needs of institutionalized children. RIM focuses on social service programming, which includes the tracking of client progress, measurement scales for treatment and supervision, a social service audit trail, a client tracking and profile system, behavioral reinforcers, and the integration of data received from all parts of the child's program. RIM provides information and reports on days of care, the school breakfast and lunch program, appointments, medications, work or vocational programs, individual and group contacts, support agency billing, child behavior and relationship tracking, and more.

The menu-driven system has full-screen fill-in-the-blank formats, operator prompts, and data verification. A help key displays information and instructions or refers the user to the user's manual.

This on-line, interactive, multiuser, user-friendly system is user definable and highly adaptable. RIM operates stand alone or with the RIM DONORS package. RIM can integrate with DIGITAL's A-to-Z software, which provides word processing, graphics, spreadsheet, data inquiry and reporting, electronic mail, and more. RIM also runs and integrates with the Digital Accounting System (DAS), which includes general ledger, accounts payable, accounts receivable, payroll, inventory control, and more.

A version of this product is available for the PDP-11 computer.

Price: \$7500 - \$10,500

Contact: Cal Towler or Robin Wood
(714) 628-1272

HILLVIEW ACRES CHILDREN'S HOME
3683 Chino Avenue
Chino, CA 91710

TOURACC

Operating System: VMS

Keywords: • Accounting • Information management • Payroll
• Scheduling

This comprehensive interactive hotel, motel, and resort system handles reservations and inquiries, guest accounting, checkin and check-out, city ledger, and other front-office guest services. Back-office system options include accounts receivable and payable, payroll, stock control, and general ledger. TOURACC can generate more than 40 management reports. Food and beverage inventory control system, POS, PABX, and energy management systems interfaces are also available.

The bar and restaurant inventory control systems interface with major brands of cash registers and POS terminals. This system includes monitors, purchase quantities and product cost, sales and cost of sales, stock levels, wastage/variations, and profit margins. This system accommodates alternate PLU numbers and multiple selling/storage locations and transfers guest charges directly to the TOURACC accommodation system.

Price: Available upon request

Contact: John R. Tennock
(07) 221-6977

COMPUTERACC
146 Leichhardt Street
Brisbane 4000
Australia

Travel System 4/11

Operating System: VMS

Keywords: • Scheduling • Statistics • Transportation
• Word processing

This on-line reservation and management system serves tour and coach operators and travel companies. The system provides flexible routes and service structuring and allows holiday and tour packages. A running cost for every mile of each coach/tour/holiday package can be generated. Plus, the system allows automatic fare restructuring for off-peak periods and off days. Statistical analysis enables forecasting of peaks and troughs. On-line reservations and space checking covers cancellations and alterations of bookings.

An integrated accounting system, which can produce relevant documentation, features daily analysis, periodic summary requirements, accurate monitoring of transactions, processing of open returns, and close control of accounts receivable.

Word processing, statistical analysis, forecasting, and management/hotel/holiday maintenance systems are also featured.

A version of this product is available for the PDP-11 computer.

Price: \$4500 – \$40,000

Contact: H. B. H. Reporter, Managing Director
021-355 3511 or Telex: 335797 FOURTH G
FOURTH DIMENSION PRODUCTS LTD.
Fourth Dimension Building, 10 King Edward Square
Sutton Coldfield, West Midlands B73 6AP
United Kingdom

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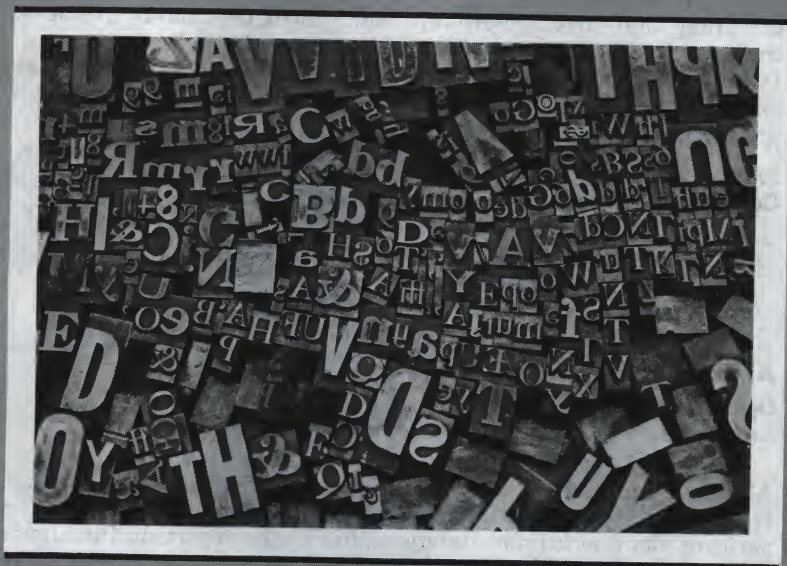
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Text Management



Cary Wolinski/Stock, Boston

ADT-ReportWriter

Operating System: VMS

Keywords: • Data dictionary • Report writer

ADT-ReportWriter is an easy-to-use full-featured report generator that uses a unique menu/help approach at every level. The user never needs to remember commands or memorize syntax.

ADT-ReportWriter uses a data dictionary and is compatible with RMS files. This product features single or multiple input data files; record-selection criteria; multilevel breakpoints; report headers; group headers; group totals, averages, counts, and so forth; page totals, averages, counts, and so forth; report totals, averages, counts, and so forth; calculated values from user-defined formulas; and placement control of text and data.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Randolph J. Reece
(303) 987-1001

INTERACTIVE SOFTWARE SYSTEMS INC.
P.O. Box 27466
Denver, CO 80227

AMWRITER

Operating System: VMS

Keywords: • Application development • Query facilities
• Report writer

AMCOR's end-user report writer and query language allows managers, accountants, salespeople, secretaries, and support personnel to perform meaningful and timely sophisticated reporting functions. Extensive tutorial, on-line aid messages are available throughout AMWRITER to assist the beginning user. The AMWRITER query and report language is free-form and English-like. AMWRITER has pretotaling and extensive calculating functions. This menu-driven application development tool does not generate code. AMWRITER blends perfectly with the comprehensive line of AMCOR New Generation Software products.

A version of this product is available for the PDP-11 computer.

Price: \$1500 - \$12,000

Contact: Marketing Department
(502) 491-9820 or 1-800-626-6268

AMCOR COMPUTER CORP.
1900 Plantside Drive
Louisville, KY 40299

Assembly Sheet

Operating System: VMS

Keywords: • Documentation • Printing

Writers and editors of manuals, books, proposals, and any other typeset document need to produce an assembly sheet for their printer. The program interactively asks questions about the document and then produces a file of a completed assembly sheet. The program will handle a document up to 1000 pages. Features include sequential or chapter-oriented page numbers, parts, tabs, index, appendix, glossary, roman-numbered front matter, notes, and self-mailers.

Customization is available.

Price: \$500

Contact: Ed Steinfeld

(617) 692-8569

EXCEPTIONAL SOFTWARE

5 Woodridge Lane

Westford, MA 01886

CCA EMACS

Operating System: ULTRIX-32, VMS

Keywords: • Development tools • Programming tools
• Word processing

CCA EMACS combines power, speed, and functionality in a text editor. With more than 400 built-in commands, CCA EMACS accomplishes virtually any editing task in just a few keystrokes. In addition, a set of more than 60 predefined variables allows each user to customize CCA EMACS. The Elisp extension language allows users to add their own commands and packages to CCA EMACS. A full on-line documentation package assists the user at any point. The efficiency of CCA EMACS is equal to or better than that of any other screen editor. On an overall basis, CCA EMACS is significantly faster than any other EMACS implementation.

Price: \$350 - \$1900

Contact: Customer Service

(617) 492-8860

CCA UNIWORKS, INC.

Four Cambridge Center

Cambridge, MA 02142

CDIS Report Writer

Operating System: VMS

Keywords: • Accounting • Manufacturing • Report writer

Memory required: 1MB.

1544 Text Management

CDIS Report Writer, written in COBOL II, allows a nontechnical user to define and produce reports. This package can be expanded to work with any IMAGE data base or related KSAM or MDE files. Report Writer defines 12 sort keys, creates temporary fields, and develops print lines by naming fields to be printed. Defined reports are saved on the selection menu. Features include editing capabilities, minimum input, default parameters, and a data dictionary with control breaks and totals.

Price: \$5000

Contact: Roy E. Mann, President
(818) 991-4060

COMPUTER DATA INFORMATION SYSTEMS
31344 Via Colinas
Westlake Village, CA 91362-3912

CJ/REPORT WRITER™

Operating System: VMS

Keywords: • Data base management • Report writer

This flexible menu-driven reporting tool allows users of CJ/BUSINESS INFORMATION SYSTEMS™ with no data processing training to create and run both standard and ad hoc report programs. This tool features self-explanatory entry screens with an on-line help facility, multiple data bases and files to retrieve the most up-to-date information for reports, multilevel security to prevent tampering and to protect sensitive data, and displays of all data items for selection.

CJ/REPORT WRITER can be used with CJ/PERSONNEL™, CJ/PAYROLL™, CJ/ADVANCED GENERAL LEDGER™, CJ/ACCOUNTS PAYABLE™, and CJ/ACCOUNTS RECEIVABLE™ systems and separately on other program packages, including KSAM and MPE structures.

Price: \$2500 - \$7500

Contact: Laura Vaughan
(813) 872-9990
COLLIER-JACKSON, INC.
P.O. Box 25546
Tampa, FL 33622

CLE (Command Line Editor)

Operating System: VMS

Keywords: • Data entry • Word processing

CLE's design function is to save keystrokes. Features include the ability to recall and edit command lines, to define 1-button commands, and to keep a log of issued commands. Editing features are compatible with DIGITAL's EDT screen editor for VT100 and VT52 terminals. A printing terminal version is also provided. CLE comes with a user's guide

plus on-line help for its keypad layout and each keystroke function. Installation is performed with a standard VAX VMSUPDATE procedure.

CLE eliminates the need to retype an entire line every time a small mistake is made. The command line may at any time be edited with CLE's keypad screen editor. Previously issued commands may be recalled with one keystroke, edited if desired, and reissued by pressing the RETURN key. Frequently used commands may be issued with a single keystroke by using CLE's define-key capability, which is also used to rearrange the CLE editing keypad.

Price: \$1050

Contact: Eve M. Goldfarb
(617) 876-7993
RUBEL SOFTWARE
215 First Street
Cambridge, MA 02142

CT*OS Spelling Corrector

Operating System: VMS

Keywords: • Data dictionary • Word processing

This is a high-performance, 100% accurate interactive spelling corrector. If a word is in the dictionary, CT*OS Spelling Corrector will find it; if a word is not in the dictionary, the word will not be accepted without your consent. CT*OS checks more than 80 words a second on documents of several thousand words or more, interacts with you, and replaces misspelled words in the document, rather than mark them for later editing.

CT*OS Spelling Corrector is furnished with a main dictionary containing more than 87,000 entries. Any dictionary that is properly formatted may be implemented, using the supplied dictionary rebuilding utility. CT*OS Spelling Corrector automatically creates a personal dictionary containing a permanent record of all words that did not appear in the main dictionary but that were accepted. That dictionary is then consulted, and CT*OS Spelling Corrector will not bother with jargon terms and proper names that appear in your personal dictionary from previous sessions.

The CT*OS Spelling Corrector performs an affix analysis on words that are not found in the main dictionary or in your personal dictionary. At no time, however, will CT*OS Spelling Corrector accept a word unless it is found in a dictionary in its original spelling. Instead, the word, along with a list of options, is displayed. If affix analysis is performed, the path taken by affix analysis processing is displayed for verification.

A version of this product is available for the PDP-11 computer.

1546 Text Management

Price: \$175 - \$500

Contact: Paul Harris

(818) 796-9374

COMPU-TOME, INC.

234 East Colorado Boulevard

Pasadena, CA 91101

DECset Electronic Technical Publishing System

Operating System: VMS

Keywords: • Application development • File management
• Printing

Distribution media: 9-track 1600 bpi magnetic tape, RX01, TU58 DECTape II cartridge.

This VAX/VMS layered application software system for the development and execution of text processing provides a reliable high-performance environment for concurrent text inputting, editing, composing, and typesetting. In addition, DECset provides a comprehensive set of tools for the development of complex text processing applications. DECset interfaces to a number of industry-standard photocomposers made by major typesetter vendors.

Systems elements include an intelligent terminal and software, a high-performance editor, a data base manager, a translator, a command language, composition, photocomposition device drivers, WPS input, protection, and on-line user aids.

Refer to SPD #25.63.xx when requesting further information on this product from your local DIGITAL sales office.

Price: Available upon request

Contact: Consult your local DIGITAL sales office (see Introduction).

DECType Word Processing Application

Operating System: VMS

Keywords: • Disk utilities • Word processing

Distribution media: RK07, RL01, RL02, RX01, RX02, TU58 DECTape II cartridge.

DECType permits concurrent word and data processing in a multiuser environment. This feature extends the data processing system with word processing capabilities.

The DECType editor creates and maintains documents stored on the full range of disk devices supported by CTS-300 and VAX/VMS. Storage available for documents will vary, depending on other data storage requirements on the same disk media.

Refer to SPD #30.32.xx when requesting further information on this product from your local DIGITAL sales office.

A version of this product is available for the PDP-11 computer.

Price: \$1200 – \$2000

Contact: Consult your local DIGITAL sales office (see Introduction).

DECType Word Processing Application

Operating System: MicroVMS, VMS

Keywords: • Printing • Word processing

Distribution media: RX01, RX50, TU58 DECTape II cartridge.

This easy-to-learn DECmate-style word processor provides most of the features of DECmate and WPS-8. Experienced WPS or DECmate users can begin using DECType immediately. Because DECType supports the WPS keyboard, users can execute most of the editing functions just as they would when using DECmate or WPS-8.

DECType permits concurrent word and data processing in a multiuser environment that extends a data processing system with word processing capabilities. The DECType editor creates and maintains documents stored on the full range of disk devices supported by VMS. Storage available for documents will vary, depending on other data storage requirements on the same disk media.

Refer to SPD #26.56.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$400 – \$3000

Contact: Consult your local DIGITAL sales office (see Introduction).

Documentation System

Operating System: VMS

Keywords: • Documentation • File management

This system allows you to display and maintain different document source files in the same directory. The system consists of the DOCUMENT.COM file and the SECTION.DOC file, which keeps all the sections in your directory, and xxxSYSTEM.DOC files, which contain the individual files in each section.

The FCL (Foxley Command Language) procedure defines symbols containing terminal-dependent control information. This procedure analyzes what type of terminal you are using and assigns the symbols accordingly.

The FCLCOM executable creates a COM file from a procedure with an extension of FCL. Comments and blank lines are stripped from the originating procedure to speed up the execution time by as much as one-third.

The documentation is not complete. Only the FCLCOM program is included as an executable. It was linked under VMS V3.2. DECUS number VAX-84.

Price: \$5 – \$225

Contact: DECUS (see Introduction)

Documentor/F

Operating System: VMS

Keywords: • Documentation • Presentation aids • Simulation

Documentor annotates model listings and aligns equations and definitions in user-specified columns. This program works with any DYNAMO software and is useful for large models or for small ones that are to be published or presented. Its references and indexes aid in model construction.

A version of this product is available for the PDP-11 computer.

Price: \$1250 - \$2500

Contact: Jack Pugh

(617) 864-8880

PUGH-ROBERTS ASSOCIATES, INC.

5 Lee Street

Cambridge, MA 02139

DocuSearch Full-Text Retrieval System

Operating System: VMS

Keywords: • Data base management • Query facilities
• Report writer • Research

Distribution media: RK07, RL02.

This rapid text-retrieval system stores the full text of any length document. As many as 33,000 documents for each data base can be stored on the PDP-11 series; VAX storage is virtually unlimited. When the data base is built by DocuSearch, a dictionary is automatically created. The dictionary is used to quickly complete searches without the need to process the text of the documents.

DocuSearch accurately performs searches on occurrences of a single word or complex strings, such as "word A and/or word B," root-word inquiries, phrase, and proximity searches. In addition to free-form text, DocuSearch allows fixed-format fields for selection, sorting, and columnar reports.

DocuSearch lists the documents meeting search criteria. The user decides which documents to review. DocuSearch browses smoothly forward and backward through the documents, traveling from one document to another on command. DocuSearch highlights search words as they appear in the document. Selected documents can be reviewed on the CRT screen, then printed.

A version of this product is available for the PDP-11 computer.

Price: \$14,500 - \$17,500

Contact: Ralph S. Trigg, Jr.

(505) 842-1247

AUTOMATED OFFICE SYSTEMS, INC.

P.O. Box 100

Albuquerque, NM 87103

EDE (External Document Exchange)

Operating System: VMS

Keywords: • Data conversion • Documentation • File transfer
• Menu handlers

Distribution media: 9-track 1600 bpi magnetic tape, RX01, TU58 DECtape II cartridge.

EDE facilitates the sharing of documents between VAX/VMS and Wang OIS systems. EDE enables users to convert Wang documents that have been transmitted to VAX/VMS in DECdx/VMS format and vice versa. Once converted, the document can be used on the receiving system.

The textual content and format of documents are preserved during conversion. However, since the capabilities of the word processing systems are not identical and since some control information is not transmitted, some attributes and functions are not converted.

During installation, the customer may install EDE as an integral component of the ALL-IN-1 Office Menu or as a VAX/VMS product that can be invoked using DCL.

Refer to SPD #26.37.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$3500

Contact: Consult your local DIGITAL sales office (see Introduction).

epsitool

Operating System: VMS

Keywords: • Software utilities • Translators

Distribution media: 9-track 1600 bpi magnetic tape, TU58 DECtape II cartridge.

These powerful text-processing utilities allow knowledgeable programmers to prepare, review, and manipulate program texts, manuals, test data, memos, and the like:

- **epsitool:look** allows the user to look at files. The system can copy lines that do or do not match, show the environment of a matched line, or underline matches. The user can select a whole file or just a part of it by line number or pattern matches.
- **epsitool:page** paginates a file, adding page numbers, page headers and footers, and line numbers; folds long lines; and prints in multi-column form.
- **epsitool:trim** performs shape transformations, such as character translation, upper-/lowercase conversion, removal of unprintable characters, replacement of multiple blanks by tabulators and vice versa, blank compression, and truncation or folding of long lines.
- **epsitool:cut** cuts files into several files, based on match patterns or line numbers.

1550 Text Management

- **epsitool:slice** rearranges fields specified either by column number or by field separators in the input records. Output fields are left- or right-adjusted or centered as specified by options. The user can transform free-format data to fixed format (column-oriented) and vice versa, to invert the order of fields and to skip or extract fields.
- **epsitool:translate** converts files from one character code to another. Besides the standard ASCII/EBCDIC tables, user-supplied translation tables can be specified.
- **epsitool:report** reports number of lines and words, maximum line length, unprintable characters, and, optionally, character frequencies.

A version of this product is available for the PDP-11 computer.

Price: \$700 - \$1200

Contact: Hartmut Feuerhahn
+ 49-30-3419008

EPSILON

Otto-Suhr-Allee 22

D-1000 Berlin 10

West Germany

FORMATTER: A Text Formatter Program

Operating System: VMS

Keywords: • Documentation • Printing

This program reads a text file containing embedded commands and formats the text accordingly. Right justification, no justification, and exact modes are available. The line spacing can be altered, as can the margins. Automatic pagination, optional headers and footers, and the ability to reserve space for equations or figures are provided.

This modification of a Pascal program enables a user to interactively enter commands, to either chain to or to include multiple text files, and to have the option of automatically adding the date to the output. DECUS number VAX-86.

Price: \$5 - \$225

Contact: DECUS (see Introduction)

Framer

Operating System: VMS

Keywords: • Computer-aided instruction • Documentation
• Presentation aids

Framer is used to format the log files created by Clyde Digital Systems' DOC, WINDOW, and CONTRL programs into screen-sized frames that can easily be played back for on-line training documentation. Each frame shows the trainee exactly what should appear on the screen at any point in a job session. Framer is also used to format log files documenting screen-oriented programs, such as FMS-type programs.

A version of this product is available for the PDP-11 computer.

Price: \$400

Contact: Carolyn Clyde
(801) 224-5306

CLYDE DIGITAL SYSTEMS, INC.
P.O. Box 4500
Provo, UT 84603-4500

HCR/EDIT

Operating System: ULTRIX-32, UNITY, UNIX* (Berkeley), VMS

Keywords: • Programming tools

With the screen editor HCR/EDIT, you use five standard keys to move in a document; your fingers do not leave home row. You always see an exact image of your file on the screen. If the system crashes while you are working, the crash-recovery mode makes a copy of your working file.

HCR/EDIT is a screen editor, but you can also use the standard UNIX* line editor through a window at the bottom of the screen. HCR/EDIT is designed for terminals with cursor addressing and high baud rates that can display all printing ASCII characters and scroll up at the bottom screen line. HCR/EDIT is also available for VAX UNIX* 4.1 BSD and can be adapted to other UNIX* configurations for OEMs.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$750 +

Contact: Sales Department
(416) 922-1937

HUMAN COMPUTING RESOURCES CORP.
10 St. Mary Street
Toronto, Ontario M4Y 1P9
Canada

IGOR Document Preparation System

Operating System: MicroVMS, ULTRIX-32, VMS

Keywords: • Documentation • Graphics • Office systems
• Word processing

This easy-to-use document preparation system is intended for writers of large, structured documents, such as reports, specifications, proposals, and so forth, and is being used to produce documents for the United Kingdom Ministry of Defense Standards. IGOR supports line graphics, arithmetic functions, tables of contents, chapter and section numbering, flexible page headings and footers, and double-sided output.

Using high-level commands such as "start chapter," the operator specifies the logical structure of a document. IGOR then uses a predefined document profile to produce a result that adheres to the layout standard for that document type. Profiles for various documentation types

are supplied with IGOR, and the user can augment those with any number of house styles. Revisions are easily made, since changes are automatically inserted in the correct format.

A version of this product is available for the PDP-11 computer.

Price: £500 - £5000

Contact: John Wilkie
(0483) 69933

NOVUS SYSTEMS TECHNOLOGY LTD.

Weymead House, Millbrook

Guildford, Surrey

England

INDENT

Operating System: MicroVMS, VMS

Keywords: • Data entry • Forms management

Distribution media: RX01, TU58 DECtape II cartridge.

This data entry and forms management product is for commercial application programs written in languages that run under the VAX/VMS operating system and that allow subroutine calls through the VAX-11 Procedure Calling Standard. VAX INDENT provides support for VT100- and VT200-series terminals and uses reverse video, bold, underline, blink, 132-column lines, scroll, reverse screen, and the "Special Graphics" character set.

VAX INDENT application programs communicate with executing forms images through the VAX mailbox facility. Forms are controlled by means of standard subroutine calls that support both single and multiterminal applications.

VAX INDENT supports both synchronous and asynchronous commands. The asynchronous commands enable host programs to continue executing application code after executing but before completing a VAX INDENT command.

VAX INDENT form definitions are created by using a text editor. The resulting source code is then compiled by using the VAX INDENT compiler, which creates an executable image, in VAX native mode. A VAX native-mode forms driver is linked to the host application program by the standard VAX linker. The form task image is executed by the application program and the VAX INDENT run-time system. Application programs that use VAX INDENT run in VAX native mode.

VAX INDENT is functionally compatible with RSTS/E INDENT except for minor operating system-imposed differences.

Refer to SPD #26.46.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$200 - \$2000

Contact: Consult your local DIGITAL sales office (see Introduction).

INed

Operating System: IS/3, IS/WB, VMS

Keywords: • Documentation

This screen-oriented text editor provides capabilities for multiple windows and other advanced editing features.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Ted White

(213) 450-8363

INTERACTIVE SYSTEMS

1212 7th Street

Santa Monica, CA 90401

IS-LEM Word Processing System

Operating System: VMS

Keywords: • Mathematics • Presentation aids • Scientific
• Word processing

This interactive word processing and formatting system offers totally new possibilities for the processing of scientific symbols and mathematical formulas with different character sets. The user executes a powerful set of instructions through function keys. That makes the system easy to use, even for casual or untrained operators, and leads to high productivity.

Apart from its scientific capacities, IS-LEM also permits the definition and retention of paragraph formats; variable line spacing in one-half steps, as on a typewriter; easy input, duplication, modification, omission, and search of text; the learning and repeated execution of complex command sequences; and interactive word division and pagination, with processing of footnotes, figures, and formulas.

With IS-LEM, the image on display corresponds exactly to what will appear on paper. For that purpose, a suitable character set is available that can be printed in normal, bold, and cursive and that, on request, can be adapted to specific needs (for example, chemical formulas, Arabic text, or the user's specific symbols).

A version of this product is available for the PDP-11 computer.

Price: \$2400 - \$3000

Contact: Paul Styfhals, Managing Director

32-(02) 251.60.36 or Telex: 25520

INFOSYSTEMS S.A.

J. B. Nowele 47 Bus 6

B-1800 Vilvoorde

Belgium

LASERSCRIPT™

Operating System: VMS

Keywords: • Graphics • Printing • Report writer
• Word processing

This native-mode shared-resource text processing and typesetting system drives a Xerox 8700 or 9700 laser printer and the Compugraphic phototypesetting machine. LASERSCRIPT allows any user with a VT100 terminal to produce high-quality documents and was especially designed to introduce the ease of use and flexibility of word processing into the high-speed Xerographic printing environment. Any editor, including EDT, may be used for manipulating the text. All commands are ASCII strings and may be manipulated with other text or generated by another VAX program, making list processing easy and flexible.

All standard text-processing features are supported, plus multicolumn text, portrait or landscape mode, multiple headers and footers, automatic change of print style (all character sets (fonts) available to the Xerox 9700 are supported), and many more typesetting features.

The perpetual license fee includes installation and training.

LASERSCRIPT is fully compatible with the SUPERSCRIPT technical word processing system.

Price: \$20,000

Contact: Roberta Hamm

(206) 827-0460

MATHEMATICAL SCIENCES NORTHWEST, INC.

2755 Northup Way

Bellevue, WA 98004

LN01 Soft Font Library

Operating System: VMS

Keywords: • Presentation aids • Printing

Memory required: 256KB. Distribution medium: 9-track 1600 bpi magnetic tape.

This extensive set of character sets for the DIGITAL LN01 Laser Printer, serving a wide range of printing applications, includes three kits of proportional type: TEXT contains 8-, 10-, and 12-point character sizes; FLEX contains 9-, 11-, and 14-point character sizes; and DISPLAY contains 18-, 24-, and 36-point character sizes. The library contains portrait and landscape orientations for each font and two basic character sets for typefaces: a multinational character set and a basic publishing character set. Other kits are available that have been designed for specific applications.

DIGITAL distributes this product under license from Compugraphic Corporation.

Refer to SPD #A3.06.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$150 – \$8820

Contact: Consult your local DIGITAL sales office (see Introduction).

MAINEDIT™ – The MAINSAIL™ Text Editor

Operating System: ULTRIX-32, UNIX* (Berkeley), VMS

Keywords: • Compilers • Programming tools

MAINEDIT is a portable, full-screen, display-oriented text editor. For packaged software vendors, MAINEDIT offers a standard way to interactively input large bodies of text for application programs. MAINEDIT provides an intelligent human user interface, applicable to many packaged applications. MAINEDIT's user-extensible command structure facilitates achieving interactive control over application programs.

Features include multiple windows and files, an orthogonal command structure, support for display terminals, easy customization for specific keyboard layouts, keyboard macros, user extensibility, and the capability of being integrated into larger systems, such as electronic mail systems.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$1190 – \$9450

Contact: Greg Jirak
(415) 324-8745

XIDAK, INC.

530 Oak Grove Avenue, Suite 101
Menlo Park, CA 94025

MASS-11

Operating System: VMS

Keywords: • Information management • Presentation aids
• Word processing

Distribution media: 9-track 1600 bpi magnetic tape, RL02.

This comprehensive word processing package features flexible formatting; automatic footnoting; scientific editing, which allows equations to be moved and edited; multiple-column printing; redlining, a unique editing technique; and more. MASS-11 is written in FORTRAN and MACRO and requires 2MB of memory and a high-speed disk drive. Multiple MASS-11 users can be supported simultaneously.

1556 Text Management

Price: Available upon request

Contact: Barbara Gossen
(312) 882-0111

MICROSYSTEMS ENGINEERING CORP.
2400 W. Hassell Road
Hoffman Estates, IL 60195

MicroBIRD

Operating System: UNIX* (Berkeley)

Keywords: • Information management • Law • Query facilities
• Word processing

This system provides text retrieval by using keywords in any combination. A keyword may be any word in the original document. MicroBIRD works on structured or unstructured text and may be used to search documents such as letters, technical journals, reports, card files, and legislation.

Anyone who needs to maintain archives of textual information and to reexamine them periodically may benefit from MicroBIRD. MicroBIRD is written in C and is available on small and medium-size computers.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: T. J. McAllister
(44) 232 247433

SOFTWARE IRELAND LTD.
26 Linenhall Street
Belfast BT2 8PJ
Northern Ireland

ML*WP (Multilingual Word Processing)

Operating System: MicroVMS, VMS

Keywords: • Office systems • Word processing

Memory required: 1MB.

ML*WP, written in Pascal, is a multilingual word processor that enables users to do word processing in any language or combination of languages. Within documents, languages — even right-to-left and left-to-right languages — can be mixed on the same line.

All system messages, help, prompts, and menus are in the user's choice of language.

Price: \$7500 – \$50,000 +

Contact: Kimberly Lilly
(617) 453-3100

COMPULEX, INC.
256 Market Street
Lowell, MA 01852

OS/ED (Screen Editors)

Operating System: ULTRIX-32

Keywords: • Source code control

One version of OS/ED is an easy-to-use, easy-to-learn module that permits a programmer to change (edit) sources, documents, data, and program files. The enhanced version is a full word processing-style editor for use in changing sources, documents, data, and program files. That version includes a powerful command set (approximately 70 commands).

OS/ED's primary function is to provide a complete set of text editing capabilities for OS/RT, Destek's real-time, multitasking operating system kernel. OS/ED can be used in any industrial or business application that requires a range of screen/text editing features and can be purchased in either binary or C source code versions.

A version of this product is available for the PDP-11 computer.

Price: \$250

Contact: Dennis Rieger
(408) 737-7211

THE DESTEK GROUP
830 East Evelyn Avenue
Sunnyvale, CA 94086

POE: A Virtual-Memory Text Editor

Operating System: VMS

Keywords: • Documentation • Printing

Memory required: Approximately 4MB.

POE is a line- and column-oriented virtual-memory text editor with procedural capabilities. It is written mostly in FORTRAN, with an internal calculator written in COBOL, and has some I/O controlled by a PL/I routine. A derivative of the UNIVAC 90/80 editor EDT, POE includes features characteristic of VMS editors. It is especially useful in processing data files in which fields are in specified columns. Programs may be written in the editor's language, with branching, looping, and relation testing accommodated. DECUS number VAX-88.

Note: Many commands have been added.

Price: \$5 – \$225

Contact: DECUS (see Introduction)

Q'TEXT**Operating System:** VMS**Keywords:** • Data dictionary • Documentation
• File management • Word processing

Q'TEXT works with ASCII files and has a full-screen editor with fully reassignable keyboard, centering, left and right flush, on-line help, justification, and search and replace. Program features give users immediate access to any part of a file, entry-time formatting, column manipulation, interactive solid-line drawing, exceptional printer control, sorting, record processing, complete file maintenance facilities, and an integrated arithmetic module. Q'TEXT supports special symbols both on the screen and on the printer, the setting of scientific and mathematical equations, proportionally spaced output, and the type-setting of text. Q'TEXT comes with an integrated spelling monitor, which reports spelling errors as they occur. When an error is indicated, the typist may correct it, disregard the warning, or augment the dictionary. A comprehensive personalized vocabulary can also be quickly built from existing documents.

A version of this product is available for the PDP-11 computer.

Price: \$875 - \$6125**Contact:** Lawrence Northway
(613) 727-1120

DAYLANN MARKETING, INC.
106 Colonnade Road, Suite 120
Nepean, Ontario K2E 7P4
Canada

RB-1 (Report Builder-1)**Operating System:** VMS**Keywords:** • Programming tools • Query facilities
• Report writer

Distribution media: cassette, diskette, magnetic tape.

This report writer features complete integration with DIGITAL's CDD and/or RMS files; structured VAX native-mode COBOL generated with a minimum amount of code and memory for the specifications and "painting" supplied; an unlimited number of files, control breaks, sort fields, page and line breaks, subtotals and grand totals fields, alternate keys, file types, user own code if required, and so forth; screen prompting and help text throughout; interactive user "painting," which specifies the complete report format, including files, field sizes, editing, group indication, and so forth, with defaults for all but two user specifications; no restrictions on programmers writing complex reports; end-user orientation for most common reports; and performance improvements of better than 100:1 over interpretive report writers.

Price: \$4500

Contact: David Hirschfeld
(201) 340-9893 or (800) 526-0161
BUSINESS CONTROLS CORP.
3-7 West First Street
Clifton, NJ 07011

Rediview (Report Distribution System)

Operating System: VMS

Keywords: • Forms management • Menu handlers
• Report writer

This system allows VAX production shops to greatly reduce the amount of report paper generated and to simplify the task of distributing it. Through simple menu-driven requests, users can designate, based on key values, which pages of any report are of interest, thereby reducing paper generation. The system groups the pages from all the reports for a particular user and prints them as one file, with a banner page indicating which reports follow. Paper generation is further reduced by a powerful on-line viewing subsystem that includes scrolling lines under fixed page headings, skipping pages forward and backward, searching on multiple key values, printing single or multiple pages that are of interest, and customizing the report page display.

The package requires only the VMS operating system and VT100- or VT200-series terminals. Multiple CPU and leasing arrangements are available.

Price: \$4000 - \$6000

Contact: Ted Levine
(415) 872-3217
ICAM TECHNOLOGY CORP.
3201 Crestmoor Drive
San Bruno, CA 94066

REX

Operating System: ULTRIX-32

Keywords: • Documentation • Programming tools

Distribution media: 9-track magnetic tape, diskette.

This full-screen text editor for UNIX* users provides an extensive set of functions for editing text files. Features include macro capabilities, search strings, and character, word, and line commands. REX is comparable in function to such editors as vi (Berkeley) and godot (Queen's).

The editor is suitable for terminals with direct cursor addressing and some simple facilities, such as clear screen, delete line, and so on. REX does not require hardware features, such as character or line insert.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

1560 Text Management

Price: \$200

Contact: Douglas J. Ross, Vice President
(613) 548-4355
ANDYNE COMPUTING LTD.
221 King Street East, P.O. Box 1496
Kingston, Ontario K7L 5C7
Canada

RUNOFF, Bonner Lab

Operating System: VMS

Keywords: • Documentation • Printing • Word processing

Memory required: 32KB.

When used with an editor, this text processor makes a complete word processor. Its syntax is almost identical to DSR (DIGITAL Standard Runoff) and is compatible with previous versions of RUNOFF. This program supports scientific word processing to produce publication-quality output and has been used to produce theses, progress reports, and scientific papers.

This version allows complete control of any printer available through user-definable escape sequences. In addition, a macro facility allows text or sequences of commands to be abbreviated to a single label. If the printer has the correct features, variable spacing, subscripting, superscripting, and equation formatting are possible. By properly defining escape sequences, the user can support different printers in a transparent fashion. In other words, the same input text will print in identical fashion on different printers with different control codes and escape sequences.

Table of contents, indexing, and subindexing are supported. LAYOUT and STYLE commands can completely change the look of the pages. Table layout is simplified by right-justified and "decimal"-justified tabs. Permanent margins that apply to the page headers are available, simplifying the setting of header and text margins.

RNO occupies a minimum of 31 to 37K bytes, depending on the operating system. DECUS number 11-703.

A version of this product is available for the PDP-11 computer.

Price: \$5 - \$225

Contact: DECUS (see Introduction)

SATURN-WP™

Operating System: VMS

Keywords: • Presentation aids • Word processing

This word- and list-processing system integrates with other SATURN® software to make a complete, single-menu system. SATURN-WP enables both the novice and the expert user to create reports, mailing lists, and letters quickly and easily. The system also provides full screen editing, a spelling dictionary, and 32,000 records that may be sorted in any way.

Formatting features include automatic index and table of contents generation, headers, footers, and more. The user controls margins, tab settings, indenting, centering, columns, and other options.

A version of this product is available for the PDP-11 computer.

Price: \$978 - \$2500

Contact: Becky H. Tighe, Public Relations
(612) 944-2452 or (800) 328-6145
SATURN SYSTEMS, INC.
6875 Washington Avenue S., Suite 218
Minneapolis, MN 55435

Screen Form

Operating System: VMS

Keywords: • Application development • Forms management
• Menu handlers • Programming tools

The menu-driven utilities of this forms management package allow screen formats to be created, amended, deleted, displayed, listed, and stored from a library of screen files. Interfacing to a user-written application can be done with subroutine calls to access the screen library file formats or a compiled screen format that is linked with the user program for fast, efficient run-time processing.

Screen layouts can be designed interactively and off line from main application program development activities, using the video capabilities of the VT100/VT200 screens (including the graphics line-drawing set).

Input/output field validation contents are prompted during screen creation, which subsequently traps commonplace typing errors. Helpful screens assist the new user.

The system manager can restrict the modification of stored screens from accidental corruption and can amend users' access to the screen library file.

A version of this product is available for the PDP-11 computer.

Price: £800 - £1500

Contact: K. E. Archer
0296 32023
S-COM COMPUTER SYSTEMS ENGINEERS LTD.
Tower House, High Street
Aylesbury, Bucks
United Kingdom

SCRIBE

Operating System: VMS

Keywords: • Documentation • Presentation aids • Printing

Distribution medium: 9-track 1600 bpi magnetic tape.

This text processing system helps both novices and expert users produce complete typeset documents. The user can compose artistic, camera-ready output in various point sizes and typefaces.

The SCRIBE data base contains standard document formats and other data required to typeset a manuscript. Those features enable the user to explore various formats.

SCRIBE allows documents to be output on any device. Line printers, letter-quality devices, photocompositors, laser printers, and GIGI are supported.

SCRIBE features automatic numbering of figures and tables, multilevel indexes, superscripts and subscripts, multiple fonts and typefaces, footnotes and endnotes, and hyphenation by table lookup. The table of contents, list of figures, list of tables, running headers, and page numbers are generated automatically. SCRIBE's features can be further expanded with GIGI.

DIGITAL distributes this software product under license from Unilogic, Inc.

Refer to SPD #A0.04.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$5000 - \$25,000

Contact: Consult your local DIGITAL sales office (see Introduction).

SED: Full-Function Screen Editor Program

Operating System: VMS

Keywords: • Documentation • Source code control

This high-performance, full-function screen editor offers support of the VT200-series terminals, using VT200 7-bit mode with support of function keys and the multinational character set. SED automatically switches the terminal to and from VT100 mode.

Superior performance is attained through optimal coding and screen-optimization routines. SED can reside in a subprocess, which allows SED to be reentered without any reinitialization. The program can run on slow terminal lines through suspension of screen updates when a command is entered and by moving the cursor window to the top of the screen.

Callability enables SED to be integrated into other software packages. Callable SED is reentrant, which enables the application to reenter the edit session. The user interface is very close to EDT in change mode. DECUS number VAX-93.

Price: \$5 – \$225

Contact: DECUS (see Introduction)

SMART Expert Editor

Operating System: ULTRIX-32, UNIX* (Berkeley)

Keywords: • Documentation • Quality control
• Word processing

The SMART Expert Editor helps technical writers to write manuals that are clear, concise, and easy to understand. The program uses the SMART Plain English Program (PEP) data base that is expanded by the user.

Under UNIX*, manuals are sent to the SMART Expert Editor, which critiques them for more than 50 types of errors in grammar, syntax, style, vocabulary, readability, translatability, and legal sufficiency for product liability.

A report is produced, showing the errors found, type, and corrections with references to a Writer's handbook.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$4500 – \$7500

Contact: J. Smart

(212) 486-1894

SMART COMMUNICATIONS, INC.

655 Third Avenue, P.O. Box 963, FDR Station
New York, NY 10150

SOS Editor for VAX/VMS

Operating System: VMS

Keywords: • Documentation • Programming tools

This line-oriented interactive text-editing program allows you to examine, create, and modify ASCII text files character by character. To use SOS, you carry on a dialog with the program as you create or modify a file.

This version of SOS, distributed with the first three versions of the VAX/VMS operating system, consists of two savesets. The first one includes the executable image and help file and can be installed using VMSINSTAL on VAX/VMS. The second saveset contains the source and build command files. The sources are provided in both the BLISS-16 source files and listing files, which can be used as input to the MACRO-11 assembler.

This software has been tested only on VAX/VMS V4.0 but should function correctly on VAX/VMS V3 systems as well. DECUS number V-SP-32.

Price: \$5 - \$225

Contact: DECUS (see Introduction)

SPELL-32

Operating System: VMS

Keywords: • Data dictionary • Software utilities

Memory required: 1500K. Distribution medium: 9-track 1600 bpi magnetic tape.

This software tool displays and helps correct spelling mistakes. SPELL-32 accepts single words interactively or quickly examines every word in a document or text file and then compares each word in a text file specified by the user to the SPELL-32 dictionary. Any word not found in the dictionary is displayed on the terminal. The user can accept the word, change the spelling, or insert the word (for example, acronyms or personal names) into a user dictionary for later reference.

SPELL-32 features private auxiliary dictionaries that augment the words in the SPELL-32 dictionary, checks for possible letter transpositions, and replaces a vowel if the wrong one is used in the word. SPELL-32 can also strip prefixes and suffixes and then look for the root word in the dictionary, specify an output file name, scan a file to generate a list of misspelled words, permit VAX-11 MACRO symbols to be accepted, and ignore words beginning with "." (RUNOFF commands).

Refer to SPD #A0.25.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$1500 - \$4000

Contact: Consult your local DIGITAL sales office (see Introduction).

"Standard" EDT Initializer

Operating System: VMS

Keywords: • File management • Programming tools

Distribution medium: magnetic tape.

This implementation of a "standard" EDT initializer file is based on the EDT initializer published in *The RSTS Professional* by David Spencer, in Vol. 4, Nos. 1 and 2 (June and October 1982). Two EDT initializer files are supplied. FULLINI.EDT contains fully spelled-out key and macro definitions. EDTINI.EDT is a production version, with the same definitions in an abbreviated form, for quicker loading for EDT.

The key functions defined include functions to manipulate EDT text buffers, file input and output functions, and utility functions. The initializer also defines two macros that (re-) define the same key functions for FORTRAN or Pascal to implement "structured programming" constructs. Those macros allow you to think in a pseudostructured language and then simplify the translation to a production language. DECUS number VAX-52.

Price: \$5 – \$225

Contact: DECUS (see Introduction)

STATUS

Operating System: VMS

Keywords: • Data base management • Information management

This interactive tool for storing and retrieving text provides on-line update and inquiry facilities for large data bases of text. Inquiry by keywords uses commands based on Boolean logic. Text is automatically indexed as it is input. All input and output text is free form. Data base administration and programming experience are not required.

Functions include word, term, and phrase searching and information on the frequency of terms, words, and phrases. A powerful synonym function is included.

STATUS is used by legal firms, libraries, research organizations, governments, and corporations requiring fast and accurate access to text. STATUS is especially suited to the automation of manuals and documentation, thus eliminating the need for multiple copies and updates of documentation.

Price: \$20,000 – \$90,000

Contact: E. Prince

(212) 349-5000

COMPUTER POWER

210 South Street

New York, NY 10002

SuperScript™

Operating System: VMS

Keywords: • Graphics • Office systems • Scientific
• Word processing

This native-mode shared-resource word/text processing system allows any user with a VT100 terminal (advanced video not required) to produce lengthy high-quality technical documents with multiple authors and complex formats. The system produces complex mathematical expressions, Greek and other special symbols, as well as graphics, which are all easily integrated with the text.

Text is automatically wrapped around graphics spaces whether in single- or multicolumn mode. The graphics may be either plotted while printing or pasted up in the spaces provided. Graphics may be generated by a graphics package or entered from a bit pad.

Any editor may be used for manipulating the text. All commands are ASCII strings (no "invisible" codes) and may be manipulated with other text or generated by another program, making list processing easy and flexible.

All standard text processing features are supported, plus multicolumn text; automatic change of type style anywhere in the text, without touching the printer; "floating footnotes"; multiple headers and footers with flexible, automatic placement; text centering and justification even with mixed proportional and fixed-pitch type styles; unlimited sub- and superscripting; and many more typesetting features.

The equation-printing system makes it easy to type Greek and mathematical symbols in with the text and to format complex functions. The size of parentheses, integral signs, and so on is automatically adjusted for the size of the expression involved.

SuperScript is cost effective. Any VT100/VT200 becomes a workstation. No special hardware is required. Various printing devices are supported, including the LA100. Enhancements to SuperScript will drive laser printers and photocomposition machines.

Price: \$4000

Contact: Roberta Hamm
(206) 827-0460

MATHEMATICAL SCIENCES NORTHWEST, INC.
2755 Northup Way
Bellevue, WA 98004

TED (The NDSU Terminal Editor)

Operating System: ULTRIX-32, UNIX* (Berkeley)

Keywords: • Communications • File management
• File transfer

Distribution medium: 9-track tar format 800/1600 bpi magnetic tape.

The TED editor is a 2-dimensional screen-oriented editor for UNIX* systems using ANSI 3.64 (VT100) terminals. Full cursor positioning, cut-and-paste operations, and multiple file editing are supported. Operation is similar to the Rand NED editor. TED optimizes communication between the host and the user terminal, resulting in about one-third the communication overhead of NED. Files are edited in memory, eliminating the disk overhead of NED; however, file size is also limited to about 40K bytes. Source code, written in C, is included in the distribution. Several small utilities are also included. This editor can be ported to systems other than UNIX*, with little modification.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$100

Contact: Daniel D. Kary
(701) 237-8171

NORTH DAKOTA STATE UNIVERSITY
300 Minard Hall
Fargo, ND 58105

TESTRAN™**Operating System:** VMS**Keywords:** • Data base management • Documentation
• Information management • Presentation aids

Memory required: 0.5MB. Distribution medium: magnetic tape.

This general-purpose system for the efficient and accurate automated production of procedure-oriented technical documentation is written in FORTRAN-77. Each document page is organized into one or more systematically arranged steps formatted to include a description of an action or procedure and the required "Target System" response. Whenever appropriate, an illustration is produced through computer graphics to provide a representational system response.

TESTRAN can be used for the automated production of test and evaluation procedures for the maintenance and rectification of hardware/software engineering changes as they occur throughout the system. Additionally, TESTRAN produces training procedures and scripts and configuration management reports and has been applied to large financial/telecommunications programs; defense command control, communications, and intelligence programs; and similar complex systems developments.

This data base-driven system consists of five principal components: a composer, a data base manager, a compiler, an output manager, and a management information subsystem. The composer initializes and updates the configuration requirements data base in accordance with the specific technical, performance, and operational requirements of the "Target System" and constructs procedure script programs for automated document production. The data base manager selectively displays, links, and manipulates composed data base entries. This subsystem can trace reference technical documentation with applicable system requirements and configuration revisions. The compiler reduces procedure script programs to certify program correctness and extract document content from referenced data base entries. A successfully compiled program is the source text for printed procedural output documentation.

Price: \$20,000 – \$60,000**Contact:** Systems Division — TESTRAN
(619) 294-9770

WESTEC SERVICES, INC.

3211 Fifth Avenue

San Diego, CA 92103

TEXT System for Technical Manuscript Preparation**Operating System:** VMS**Keywords:** • Pre- and postprocessors • Printing

Memory required: 16.5K bytes.

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Combining TEXT System with DECUS RUNOFF (rno) forms a comprehensive text processing system for technical manuscript preparation of PDP-11 and VAX-11 computers with NEC Spinwriters and the Technical Math/Times Roman type thimble.

All sources and full documentation on each component are provided. DECUS number 11-603.

Note: DECUS RUNOFF is necessary to use this package. The version is M02.4, DECUS number 11-530.

A version of this product is available for the PDP-11 computer.

Price: \$5 - \$225

Contact: DECUS (see Introduction)

TIPS (Text Information Processing System)

Operating System: VMS

Keywords: • Mathematics • Word processing

TIPS, written in C, is now being ported to DIGITAL from Data General computers. TIPS is a full-featured, yet easy-to-use product designed for the inexperienced operator. The price includes Math, Sort, Select, and all expected word processing features. Options available are a spelling dictionary and Greek letters for technical math work. Common letter-quality printers are supported, and the product comes with a 6-month warranty for full telephone support.

A version of this product is available for the PDP-11 computer.

Price: \$3500 - \$6000

Contact: Diana Slocombe
(415) 494-7500

IPT CORP.

1096 East Meadow Circle
Palo Alto, CA 94303

TXTSYS (Text System for Technical Manuscript Preparation)

Operating System: VMS

Keywords: • Documentation • Pre- and postprocessors
• Programming tools

This collection of software tools combines with DECUS RUNOFF (RNO) to form a comprehensive text processing system for PDP-11 and VAX-11 computers with NEC Spinwriters and Technical Math type thimbles.

- TXT, an RNO technical manuscript preprocessor, facilitates use of the super-/subscripting and alternate character set features of the Spinwriter/TM thimble combination.
- RNO, DECUS RUNOFF is modified to pass TXT control sequences transparently to its fill/justification computations. (This is Version M02.4, DECUS number 11-530.)

- MP, a macro preprocessor, and TXTSYS.H, Text System macros, define sequences of TXT/RNO commands as new commands to make document entry easier and to selectively include portions of text from other files within a document.
- EQU transfers just the equations from a document into a file that will yield an annotated, formatted text to speed debugging of equations.
- QIO (RSX-11M/VMS)/SP: (RT-11) are programs to handle output of the often very long sequences of control characters to the Spinwriter.
- DOC, the Text System control program, coordinates and automates processing by the Text System components EQU, MP, TXT, RNO, and QIO/SP:. DOC provides a uniform command interface to the Text System components for RT-11, RSX-11M, and VMS.

All sources and full documentation on each component are provided, including a detailed manual on TXT, which is written in MACRO-11 (as are RNO, QIO, and SP:) and is commented to be easily adapted to other output devices. DOC, EQU, and MP are written in DECUS C; task/save images are provided in case DECUS C is not available.

A version of this product is available for the PDP-11 computer.

Price: \$200

Contact: Dan Dill

(617) 353-4277

BOSTON UNIVERSITY

Chemistry Department

675 Commonwealth Avenue

Boston, MA 02215

TYPSET — Digitized Character Subroutines

Operating System: VMS

Keywords: • Device drivers/handlers • Graphics
• Presentation aids

TYPSET is a collection of FORTRAN subroutines for producing characters on a Zeta plotter. Subscripting, superscripting, backspacing, and variable spacing between letters are provided. The characters may be skewed to any angle, and the height-to-width (aspect) ratio also may be varied.

A portion of the TYPSET software allows users to generate their own symbols and character sets. The characters are grouped into alphabets, the majority with both upper- and lowercases. Punctuation; mathematical, map, music, weather, and electrical symbols; and astrological signs also are included.

A version of this product is available for the PDP-11 computer.

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Price: \$1200

Contact: Bill Manos, Product Manager
(415) 372-7568

NICOLET COMPUTER GRAPHICS DIVISION
P.O. Box 3020
777 Arnold Drive
Martinez, CA 94553

/usr/tools

Operating System: ULTRIX-32

Keywords: • Documentation • Media • Printing

Distribution medium: 9-track 1600 bpi magnetic tape.

This software, written in C, allows the user to produce documentation, manuals, text, and similar publications on UNIX*-based DIGITAL systems with the etp laser printer. Control is maintained in house while providing a more professional appearance for the documents through the use of publishing-quality fonts that are on your DIGITAL computer.

The etp 8/300 laser printing system allows the user to produce documents more quickly and efficiently. The 8/300 may be used as either a final output device or as a proof before a file is sent to a typesetter.

The /usr/tools software supports the laser printer with text-formatting utilities of device-independent troff. More than 30 typeset-quality fonts are available. A font-sizing program is included with the software, allowing the user to create documents that use multiple fonts and sizes. The fonts are provided in a 24-point master size. The user can then adjust specific characters within the text to the desired point size.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$1695 - \$18,870

Contact: Bill Fullilove
(503) 639-4024

ETP SYSTEMS, INC.
10150 S.W. Nimbus, Building E2
Portland, OR 97062

VAX-11 DSM Routine Buffer Editor by Using Screen Editor

Operating System: VMS

Keywords: • Documentation • Programming tools

Memory required: 16KB.

This routine is VAX-11 DSM Routine Buffer Editor by using screen editor. DECUS number VAX-76.

Price: \$5 - \$225

Contact: DECUS (see Introduction)

VERSACOMP

Operating System: VMS

Keywords: • Printing

This composition and pagination system provides a powerful typesetting tool; the elaborate data-manipulation facilities accept practically any data file format. Little or no markup is required, yet VERSACOMP provides virtually unlimited composition and page-building capabilities. The high-quality composition supports a variety of typesetters. All system programs are written in assembly language for optimal performance.

Price: \$48,000

Contact: John W. Kromer, Jr.

(818) 908-0404

TCI

7120 Hayvenhurst Avenue, Suite 410

Van Nuys, CA 91406

VFM (Viking Forms Manager)

Operating System: UNIX* (Berkeley, System V), VMS

Keywords: • Data collection • Data entry • Development tools
• Forms management

Distribution media: magnetic tape, RX01, RX02, RX50, TU58 DECTape II cartridge.

VFM interactively creates, operates, and maintains the data entry part of programs and maximizes programmer and computer efficiency. VFM consists of four parts:

- The VFM Forms Development Facility creates and modifies screen formats separately from the program logic. The forms are compiled into object modules that are linked with the application program. Appropriate documentation is automatically generated.
- The VFM Execution Time Subroutines Library lets the programmer address the data on a terminal screen as a single logical record. The terminal operator is supported with a wide range of special function keys and immediate data validity checks.
- The VFM Exciser lets the user test the human engineering and validation features to ensure that the forms are logically correct, efficient, and aesthetically pleasing.
- The VDE Data Entry System is a complete program for performing generalized data entry functions from a CRT terminal. VDE brings all the functionality of a stand-alone key-disk machine to the user's computer. In most cases, no programming is required. The screen forms and menus are defined and modified interactively along with the record description of the output file.

A variety of user-written exit routines may be incorporated to enable VDE to perform extremely complex functions, such as data base maintenance, on-line order entry, or inventory systems.

VDE can create new files, update existing files, and key verify existing files. VDE has an examine mode for inquiry-only applications. VDE has a flexible search mechanism to locate any record in the file.

The advanced human engineering features of VDE significantly increase operator productivity. A variety of terminal types are supported.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$750 - \$10,500

Contact: John R. Haley, President
(918) 745-6550

VIKING SOFTWARE SERVICES
2815 E. Skelly Drive, Suite 816
Tulsa, OK 74105

VOILA!

Operating System: VMS

Keywords: • Programming tools • Report writer

This multiframe free-format report-generating system can be used by both programmers and nonprogrammers to quickly and easily create ready-to-use business-oriented report programs and the source code for those programs in a variety of DIGITAL-based operating systems and language compilers. VOILA! enables its users to visualize and manipulate the format of text and data that will appear on the final generated report while the report is being created and prior to program generation.

Text and data manipulation is accomplished by use of special function keys, which can put the user into any one of nine modes. Whenever the user enters a mode, the text or data created and/or repositioned on the CRT screen relates to that mode.

VOILA! can readily be superimposed over any existing data file structure.

A version of this product is available for the PDP-11 computer.

Price: \$1250 - \$2500

Contact: Sales Department
(412) 262-5507

INFORMATION AND SYSTEMS RESEARCH, INC.
410 Rouser Road, Airport Office Park, Building #1
Coraopolis, PA 15108

VSH

Operating System: VMS

Keywords: • Programming tools

VSH is the VT100 command line editor for RSX and provides command editing using EDT keypad commands, command recall, and concatenation of commands delimited by a slash (/).

VSH accepts commands in an EDT keypad editing mode and retains those commands on a dynamic stack for later recall and editing. Command editing implements that portion of the EDT VT100 keypad mode appropriate to a single line:

- Command stack searching (Search For/Find Next)
- Character-, word-, and line-delete buffers
- Cursor movement by character, word, or line
- Full EDT-style on-line help at any time during command editing

EDT commands, which affect interline movement (arrow keys, back space, new line), cause movement through and recall from the command stack. Multiple commands may be concatenated, delimited by a slash (/).

The command stack may be displayed at any time, and a particular previous command line may be retrieved directly by number. The command stack may be cleared (for security) at any time. The size of the command stack defaults initially to 16 commands but may be decreased or increased to a limit of 36 commands at any time. In the same manner that comments are placed in command files, commands prefixed with an exclamation point (!) may be placed on the stack, without execution, for later recall and editing.

A version of this product is available for the PDP-11 computer.

Price: \$70 - \$140

Contact: Dan Dill

(617) 353-4277

BOSTON UNIVERSITY

Chemistry Department

675 Commonwealth Avenue

Boston, MA 02215

WATCOM GML (Generalized Mark-up Language)

Operating System: VMS

Keywords: • Documentation • Word processing

Distribution medium: 9-track 1600 bpi magnetic tape.

This portable text formatting system, developed by WATCOM Systems Inc., processes Generalized Mark-up Language documents quickly and provides comprehensive error diagnostics in GML terms. Text can be included from other files to permit easier modification of the document. The user can create and modify layouts. The layout specifiers have a GML tag format and are easy to learn and use. Since a GML layout

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controls the format of the document, documents can be produced in a consistent format. Documents can be prepared and printed on one machine and then transferred to a different machine. Thus, document development can be off-loaded from more expensive equipment.

WATCOM GML is a self-contained package. When an error is detected, a description and the location of the error are displayed. WATCOM GML is written in Waterloo Systems Language.

Price: \$900 – \$3600

Contact: Jean Steffensen
(519) 886-3700

WATCOM PRODUCTS INC.
415 Phillip Street
Waterloo, Ontario N2L 3X2
Canada

WORD-11

Operating System: VMS

Keywords: • Word processing

This word processing system runs on the RSTS/E, RSX-11M, RSX-11M+, VAX/VMS, and P/OS operating systems. WORD-11 has acquired a proven record of effectiveness and reliability, with more than 1000 installations worldwide.

WORD-11's hierarchical menu structure facilitates ease of use, and the labeled keys make WORD-11 easy to learn. WORD-11 enables users to create and edit documents on line, print those documents on hard-copy output devices, and maintain an index of documents on disk. Advanced features include a queued printing system, list processing, and spelling-error detection.

The WORD-11 Editor allows users to display a document on the screen, including bolding and underlining, and to use editing keys to move through the text — deleting, underlining, bolding, paging, and changing margins quickly and easily. Additional editing features include automatic footnoting, table of contents and index generation, and column features.

List Processing permits the user to mass-produce a document but still include personalized information. Spelling Error Detection includes a dictionary provided by Data Processing Design, as well as the capability to add words or create multiple user-defined dictionaries.

A version of this product is available for the PDP-11 computer.

Price: \$595 – \$9500

Contact: Eric L. Moothart, Software Marketing Director
(714) 970-1515

DATA PROCESSING DESIGN, INC.
1400 North Brasher Street
Anaheim, CA 92807

WORD-11® Encryption Option

Operating System: VMS

Keywords: • Data conversion • Security • Word processing

Distribution medium: 9-track 800/1600 bpi magnetic tape.

The DMG Encryption Option protects WORD-11 documents by storing them in encrypted form. Each document can be coded and decoded, using an operator-selected key. For RSTS/E, the link to the Encryption Option is by way of the main WORD-11 menu. For VMS, encryption is performed externally to WORD-11. Two master keys are provided so that responsible management personnel can decode all documents. The master keys must be used together, and either one can be changed by its authorized holder.

WORD-11 is a proprietary product owned by Data Processing Design, Inc., 1400 North Brasher Street, Anaheim, CA 92807. In Canada, WORD-11 is supplied and supported by Digital Management Group Ltd.

WORD-11® is a registered trademark of Data Processing Design, Inc.

A version of this product is available for the PDP-11 computer.

Price: \$1200

Contact: Ken Allsopp
(416) 225-7788

DIGITAL MANAGEMENT GROUP LTD.
4800 Yonge Street
Willowdale, Ontario M2N 6G5
Canada

WPS-PLUS/ALL-IN-1

Operating System: MicroVMS, VMS

Keywords: • ALL-IN-1 • Office systems • Word processing

Distribution media: 9-track 1600 bpi magnetic tape, RA60, RK07, RL02.

This document-processing software system provides Gold Key-style word processing for ALL-IN-1 Version 2.0 users. Users can create, edit, and print documents; produce form letters and maintain mailing lists; file and retrieve documents by document name, number, or keyword; and include data from a VMS application in a document. Users can convert a WPS-PLUS document to a VMS file and send electronic mail to ALL-IN-1 or VAX/VMS users. Technical characters, scientific equations, diagrams, matrixes, and VT100 character set equations can be included in a document.

Refer to SPD #26.48.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$4000

Contact: Consult your local DIGITAL sales office (see Introduction).

WPS-PLUS/VMS

Operating System: VMS

Keywords: • Office systems • Presentation aids

Distribution media: 9-track 1600 bpi magnetic tape, RA60, RK07, RL02, RX01, TU58 DECtape II cartridge.

WPS-PLUS/VMS is a document-processing system that provides Gold Key-style word processing for VAX/VMS users. WPS-PLUS/VMS allows VAX/VMS users to create, edit, and print documents; produce form letters and maintain mailing lists; file and retrieve documents by document name, number, or keyword; include data from a VMS application in a document; convert a WPS-PLUS document to a VMS file; use VMS mail to mail a document, which is first converted to a VMS file; and perform self-training using computer-based instruction.

WPS-PLUS/VMS, with separately purchased options, allows users to exchange documents with DECmate II and DECdx/VMS; verify and correct spelling and capitalization while editing; and include diagrams, matrixes, and VT100 character-set equations in a document.

Refer to SPD #26.27.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$6000

Contact: Consult your local DIGITAL sales office (see Introduction).

X

Operating System: MicroVMS, VMS

Keywords: • File management • Word processing

Distribution medium: magnetic tape.

This line editor for handling and manipulating characters is used in text processing, editing general files, such as batch control files and program files. One-letter commands enable the user to list, add, merge, duplicate, and delete characters or lines. X is terminal independent and can be used on a VT220 or an LA36 terminal.

X is written in BASIC and provided in source form.

A version of this product is available for the PDP-11 computer.

Price: £99 - £130

Contact: M. Stewart

(441)-897-9731 ext. 17

PLAN PLUS LTD.

P.O. Box 327

London W44QD

United Kingdom

XDA (Document Assembly Package)

Operating System: ULTRIX-32, UNIX* (Berkeley, System III, System V), VMS

Keywords: • Data entry • Documentation • Office systems

This document assembler operates from the XED menu processor and accesses XED office system programs. XDA allows the operator to create a template that specifies mnemonic references to portions of other files. Left- and right-margin information, with optional right-margin justification, may be specified for each mnemonic entry. XDA assembles documents from files specified in the template, merges up to 500 floating data fields, and reformats the document while implementing automatic pagination, widow/orphan elimination, automatic page and paragraph numbering, autohyphenation, and footnote control. The completed document may be printed on either draft- or letter-quality printers.

XED office system programs contain a terminal description file and a printer definition and proportional spacing increment table (both user definable) to provide maximum installation flexibility and efficiency in a multiuser environment. XED is loaded in the UNIX* multitasking operating system as a shared text file.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$2000 - \$15,000

Contact: Ted Ferguson
(818) 884-2000

COMPUTER METHODS, LTD.

P.O. Box 3938

Chatsworth, CA 91313

XTE Programmer's Editor

Operating System: ULTRIX-32, VMS

Keywords: • Documentation • Word processing

This sophisticated general-purpose full-screen ASCII text editor uses the same command structure as the XED word processor. The program is available in two versions. XTE operates under the XED menu processor and shares several modules with XED. TE is a stand-alone version.

The XTE Programmer's Editor (in either version) allows a user to directly insert text and external files, move and copy blocks and write blocks to external files, and display documents with forward and reverse vertical screen scrolling and horizontal scrolling out to 340 columns. Search and replace add to the editor's flexibility for programmers. The commands and functions are the same as those used in the XED word processing system.

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XED office system programs are designed and coded for UNIX* Version 7, System III, System V, and Berkeley 4.1 and 4.2. The programs contain a terminal description file and a printer definition and proportional spacing increment table (both user definable) to provide maximum installation flexibility and efficiency in a multiuser environment. XED is loaded in the UNIX* multitasking operating system as a shared text file.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Ted Ferguson

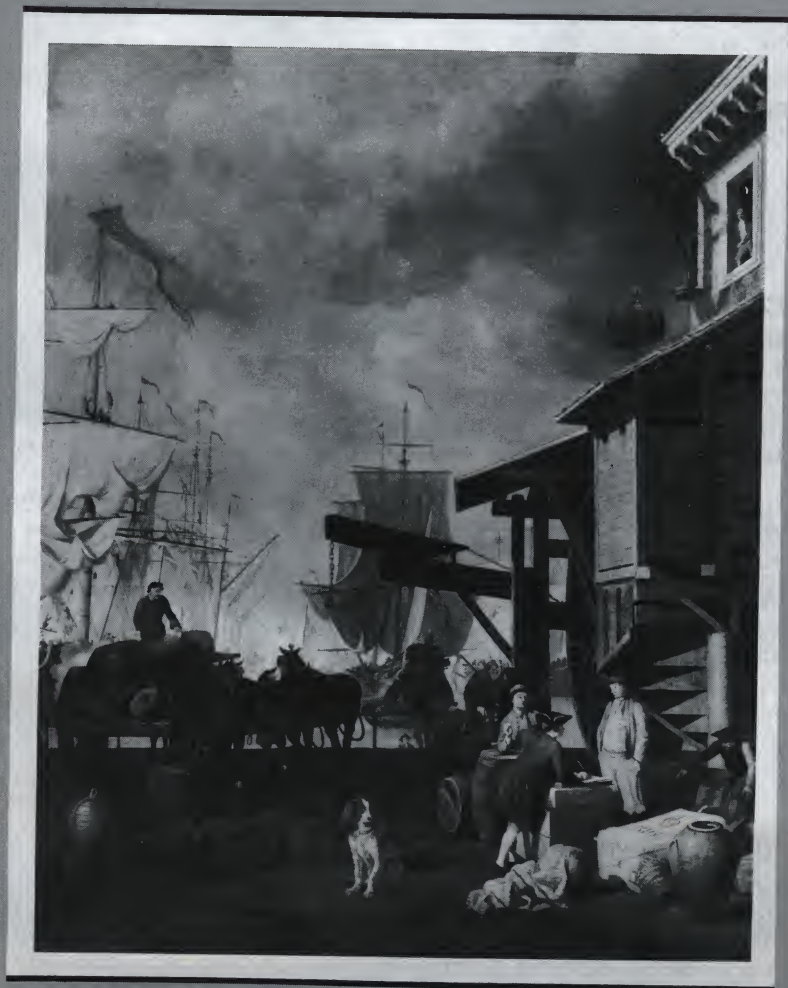
(818) 884-2000

COMPUTER METHODS, LTD.

P.O. Box 3938

Chatsworth, CA 91313

Trade



The Bettmann Archive

BARR (Billing and Accounts Receivable for Retailers)

Operating System: VMS

Keywords: • Accounts receivable • Billing • Retail

This balance-forward system is designed to help a retail business conduct accounts receivable functions. Data entry may be either through a CRT or by an optional communication module that polls local and remote POS terminals. In addition to generating aged statements and other aged accounts receivable listings, the system provides for on-line inquiry into customer accounts, maintains sales history by customer, and produces delinquent-account reports and notices. A mailing label option is also available.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: John T. Rasted
(203) 265-2226

SOFTWARE DYNAMICS, INC.
1000 Yale Avenue, P.O. Box 500
Wallingford, CT 06492

Clothier

Operating System: VMS

Keywords: • Point of sale • Purchasing • Retail
• Textiles/clothing

This complete system for the medium-sized clothing retailer keeps track of the purchasing and merchandising of clothing by style, color, size, vendor, and branch location for optimum stock reporting. Each item is identified by a 9-digit SKU number, description, size table number, season cycle, reorder Y or N, reorder cost, net cost, retail price, ticket price, and so on.

A version of this product is available for the PDP-11 computer.

Price: \$3000 - \$10,000

Contact: Nigel Harris
(613) 829-8888

HARRIS COMPUTER SYSTEMS
16 Credit Union Way
Nepean, Ontario K2H 8R6
Canada

Commodity Management System

Operating System: VMS

Keywords: • Accounting • Inventory • Investments • Metals

This system for companies that trade commodities such as metal, sugar, cocoa, and coffee handles accounting and contract administration. The system processes contracts in the Comex, LME, and International Petroleum exchanges and processes foreign currency exchange

and physical contracts. Future-contract closeouts update A/R and G/L. Physical-contract purchases/sales update A/R, A/P, G/L, inventory, and physical contract.

This system is on line and integrated. A contract is entered and available for display, report, and evaluation immediately. You can find out a customer's risk exposure at any time.

The system, written in BASIC, calculates original and variation margins, prints contracts, and sends statements to the customer.

Price: \$50,000 – \$100,000

Contact: Donne K. Hong
(212) 221-0682

COMPURITE INC.

45 West 45th Street, Suite 801
New York, NY 10036

ICAS 1123-Plus (Inventory Control Accounting System)

Operating System: VMS

Keywords: • Accounting • Inventory • Point of sale • Retail

This menu-driven point-of-sale invoicing package for part suppliers and inventory-intensive retail establishments is structured for easy user access, with submenus for inventory control, sales, accounting, management reports, and system utilities.

- Inventory control features parts and vendor maintenance, inventory reports, supersessions, alternates, automatic ordering, and popularity pricing.
- Point-of-sale invoicing and pick lists are featured in the sales submenu.
- Accounting includes accounts receivable, accounts payable, payroll, and general ledger.
- Management reports include cost and sales analysis as well as core, audit, pick list, and sales reporting.
- Multistore networking is featured.

A version of this product is available for the PDP-11 computer.

Price: \$10,000

Contact: Jeff Bauman
(201) 729-3197

ICAS COMPUTER SYSTEMS, INC.

160 Woodport Road
Sparta, NJ 07871

IN-TOUCH™

Operating System: VMS

Keywords: • Inventory • Point of sale • Retail • Wholesale

Distribution media: 9-track 1600 bpi magnetic tape, TU58 DECtape II cartridge.

This full retail entry/control system at cashier point of sale is flexible enough to match the most imaginative merchandising techniques. The system provides variable pricing for each quantity or customer code and a suggested order quantity report based on movement history as well as trend and user-defined seasonal factors. Modules have access security and data security through a management-maintained table of passwords, allowing accounting control and definition of responsibility. A user needs minimal training to learn the system, which allows for preentry of promotional prices with starting and ending dates, has provisions for statistical analysis of inventory adjustments and analysis, and produces a salesperson productivity report. Approval is required for charges beyond credit limit, for merchandise returns and credit memos, and for price override at point of sale.

The system provides daily back-office reporting of charges beyond limit, merchandise returns, and price overrides; charge account agings at call; inventory quantity and inventory lead-time warning reports; gross-profit reporting; sales dollars, turnover, and item movement reporting with charge account controls; on-line master file maintenance; single or multistore capabilities with single or multiple cashiers; multiterminal access; screen-formatted entry; selective reporting; interactive HELP on call; and customer, vendor, and product listings. A standard item code can allow tracking an item to a location in sales or warehouse areas; the transfer of inventory between stores is controlled; and spiff, PM, and so on, information is captured at point of sale from information in the product master file.

A version of this product is available for the PDP-11 computer.

Price: \$25,000 - \$80,000

Contact: Nathan I. Lieberman
(812) 479-6951

EVANSVILLE DATA PROCESSING CORP.
1010 S. Weinbach Avenue, P.O. Box 2469
Evansville, IN 47714

International Trade Software

Operating System: VMS

Keywords: • Accounting • Information management
• Transportation

ASA's International Trade applications are simple-to-use, on-line, fully integrated information systems. The software is designed to produce the necessary documentation for customhouse brokerage and freight-forwarding operations. Additional accounting programs handle billing, receivables, payables, payment verification, and general ledger reporting functions. The system can communicate for data transmission purposes with U.S. Customs, shippers, steamship lines,

Telex, and more. The system can also handle shipment tracing, liquidations, missing documents, landed cost, warehousing, ocean and air brokerage, air freight forwarding, and TSUSA maintenance.

A version of this product is available for the PDP-11 computer.

Price: \$20,000 - \$400,000

Contact: Richard Bowe
(603) 898-7000

ASA INTERNATIONAL TRADE SERVICES
10 Manor Parkway
Salem, NH 03079

MAILHOUSE™

Operating System: VMS

Keywords: • Billing • Distribution • Inventory • Order entry

Distribution media: 9-track 1600 bpi magnetic tape, TU58 DECTape II cartridge.

MAILHOUSE is completely interactive and gives a business the flexibility to properly track and maintain an invoice from the time an order is received from a customer until shipment is complete. Inventory levels are automatically maintained on line during invoice entry. Items are placed on back order if invoice entry indicates that an adequate inventory does not exist to fulfill an order. In cases of phoned-in orders, the sales tax and UPS or parcel post charges are automatically included in the amount while the customer is still on the line.

Once an invoice is entered, the operator must obtain approval for credit on those invoices selected by MAILHOUSE as ready for shipment. The order will be held until credit clearance is given.

Back-ordered invoices are automatically checked each day to determine the availability of inventory for items. The results are a cross-reference report that gives the operator knowledge of the invoices the system has on hold. MAILHOUSE includes an invoice editor designed to minimize operator problems by simulating invoice entry.

In addition to invoicing, MAILHOUSE allows a business to keep track of sales, cost of sales, taxes, inventory levels, gross profit, and movement. To comply with FTC regulations, a day-counter and a notifier for each invoice are included.

A version of this product is available for the PDP-11 computer.

Price: \$25,000 - \$30,000

Contact: Nathan I. Lieberman
(812) 479-6951

EVANSVILLE DATA PROCESSING CORP.
1010 S. Weinbach Avenue, P.O. Box 2469
Evansville, IN 47714

Point of Sale

Operating System: VMS

Keywords: • Financial analysis • Inventory • Point of sale
• Purchasing

This system is fully operational in multiple checkout situations. The special terminal supports laser scanner, credit card reader, overprinting, and so on. Full cash control and invoice production are provided even if the processor fails. The unit operates stand alone.

The cost for each checkout is around \$3000, and multiple checkouts for each processor keep total costs for each checkout under \$6000.

A version of this product is available for the PDP-11 computer.

Price: \$3000 - \$100,000

Contact: Dr. E. A. Haworth
(061) 248-7100

MANCOS COMPUTERS
3 Wynnstay Grove, Fallowfield
Manchester M14 6XG
United Kingdom

Retail Furniture System

Operating System: VMS

Keywords: • Financial management • Inventory • Point of sale
• Retail

Distribution media: 9-track 1600 bpi magnetic tape, TU58 DECtape II cartridge.

This integrated order entry, accounts receivable, and inventory management system helps firms control the retail process. The system concentrates on the accounting of sales and inventory and incorporates the management control tools to minimize costs and maintain a fair return on investment. Retail Furniture System identifies each piece in inventory and will identify its location at call. The system also reports the need to fill a location on the display floor due to merchandise sales.

Operated in a conversational, interactive mode, Retail Furniture System performs extensive edit checking, thereby ensuring the integrity of the data. At the point of sale, a receipt is printed, and inventory and accounts receivable are automatically updated. The inventory-received entry function immediately updates inventory and causes inventory tags to be printed. Through that function, special-order and sold items are tagged and flagged. Available as options to the Retail Furniture System are EDPC's ABLE® general ledger and management reporting system, AIM™ (Affordable Information Management) payables, AIM payroll, and other complementary systems.

A version of this product is available for the PDP-11 computer.

Price: \$29,000 – \$80,000

Contact: Nathan I. Lieberman
(812) 479-6951

EVANSVILLE DATA PROCESSING CORP.
1010 S. Weinbach Avenue, P.O. Box 2469
Evansville, IN 47714

Retail Inventory and Receivables

Operating System: VMS

Keywords: • Accounting • Inventory • Point of sale • Retail

This easy-to-operate system provides an accurate reporting and management analysis tool. Unproductive items are automatically recognized and eliminated. One easy entry at the point of sale updates inventory, receivables, and general ledger.

Features include inventory tracking with interaction to accounts receivable at point of sale; stock-status reports that indicate items above or below the desired inventory levels; sales reports by item, location, and salesperson; automatic production of invoices and/or balance-forward statements; production of aged trial balance; automatic calculation of finance charges; automatic interface to general ledger, payroll, and accounts payable and receivable systems; automatic production of accounts payable and payroll checks; production of inventory sales tags with retail price; and interaction with the word processing system for personalized customer letters and mailings.

A version of this product is available for the PDP-11 computer.

Price: \$1500 – \$20,000

Contact: William R. Paschal, Jr.
(405) 843-7323

DATATEK CORP.
818 N.W. 63rd
Oklahoma City, OK 73116

RIMS (Retail Inventory Management System)

Operating System: VMS

Keywords: • Inventory • Purchasing • Retail
• Sales analysis

This system for tracking inventory at both SKU and class levels provides detailed inventory and sales analysis information for multiple locations on a daily, monthly, and year-to-date basis. The package also includes a purchase order tracking module for generating open-to-buy reports. Input into the system may be either by an optional communications module that polls local and remote POS terminals or through CRT entry. Additional optional modules include A/R, A/P, and G/L tailored for the retail business.

A version of this product is available for the PDP-11 computer.

Price: \$8000 – \$23,000

Contact: John T. Rasted
(203) 265-2226

SOFTWARE DYNAMICS, INC.
1000 Yale Avenue, P.O. Box 500
Wallingford, CT 06492

TABS (Total Application for Building Suppliers)

Operating System: VMS

Keywords: • Construction • Information management • Retail
• Wholesale

TABS is a user-friendly software system designed specifically for building material retailers, wholesalers, and home improvement centers. TABS emphasizes inventory control and customer credit and provides the full range of functions and reports. A few highlights are:

- Point-of-sale option for retail establishments; back-office order entry for wholesalers
- Multitasking capability (any application may be run simultaneously with virtually any other application)
- Time-sharing attributes, with file sharing
- Expedient management-by-exception approach to data retrieval
- Menus, prompts, and other interactive aids
- Secure password protection for each branch of menu, with restricted access to the operating system
- Screen scrolling for convenient on-line inventory item and customer search
- User-defined system defaults and other time-saving features
- Screen display of virtually any hard-copy report
- Full audit trails, legality-check network, and data editing

The standard TABS package consists of six fully interfaced, interactive software modules: order entry/inventory, accounts receivable, accounts payable, purchasing, general ledger, and payroll. Each module can also function independently, as well as be interfaced to optional software.

A version of this product is available for the PDP-11 computer.

Price: \$15,000 +

Contact: Hugh MacDonald, Sales Manager
(617) 964-4011

COMPUTER SOFTWARE CONSULTANTS, INC.
200 Boylston Street
Chestnut Hill, MA 02167

VantagePoint

Operating System: MicroVMS, VMS

Keywords: • Accounts receivable • Inventory • Point of sale
• Wholesale

This secure, easy-to-operate system includes complete inventory control and accounts receivable management for wholesale and/or retail businesses. VantagePoint facilitates the management of large, multiple-store and warehouse inventories; realizes savings for the user through LIFO valuation; provides detailed 50-character item descriptions for invoices and estimates; and provides a consolidated picture of the user's inventory.

VantagePoint was developed to provide management with the tools to make crucial business decisions. The flexible, customizable system can be integrated with existing manual or computerized accounting systems. The system provides management reports, improves cash flow with its method of accounts receivable, and helps maximize profit with its complete inventory management system combined with point of sale.

A version of this product is available for the PDP-11 computer.

Price: \$15,000 – \$30,000

Contact: Ellen L. Howlett
(602) 887-0530

UNIQUE CONSULTING SERVICES
3234 N. Reno, P.O. Box 55015
Tucson, AZ 85705

The first of the year was a very dry one, and the crops were much injured by the drought. The weather was very hot, and the crops were much injured by the drought. The weather was very hot, and the crops were much injured by the drought.

The second of the year was a very wet one, and the crops were much injured by the drought. The weather was very hot, and the crops were much injured by the drought. The weather was very hot, and the crops were much injured by the drought.

The third of the year was a very dry one, and the crops were much injured by the drought. The weather was very hot, and the crops were much injured by the drought. The weather was very hot, and the crops were much injured by the drought.

Transportation



Camerique

Automotive System

Operating System: VMS

Keywords: • Accounting • Automotive • Inventory • Payroll

The Automotive System provides accounts receivable, accounts payable, payroll, general ledger, a purchase order system with guide history, order entry and billing, invoice and picking ticket generation, sales analysis, inventory control and analysis, over-the-counter invoicing capabilities, inventory cross-reference and information lookup, and word and list processing.

A version of this product is available for the PDP-11 computer.

Price: \$2000 - \$20,000

Contact: Andrew Yasenachak
(201) 231-9400

UNITRONIX DATA SYSTEMS, INC.

50 County Line Road
Somerville, NJ 08876

COLTS (Computerized On-Line Transportation System)

Operating System: MicroVMS, VMS

Keywords: • Accounting • Billing • Payroll • Sales analysis

Written in DIBOL, this software handles the functions of freight billing/accounts receivable, general ledger, fuel and mileage, operations, accounts payable, driver notification, settlement payroll, dispatch, and vehicle maintenance. The system is designed for long-haul trucking companies that operate 25 or more trucks. COLTS provides sales analyses tools and the ability to designate each truck as a cost center for P & L purposes. Same-day billing improves cash flow, and past-due account collection reduces the time spent preparing state fuel and mileage reports. The payroll system handles office, company driver, and owner/operator accounts.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: David Ducey
(515) 287-6683
SYSTEMS SUPPORT, INC.
P.O. Box 1057
Clive, IA 50053

CRAS (Car Rental Agreement System)

Operating System: VMS

Keywords: • Accounting • Automotive

This system allows daily transactions to be recorded for the initiation and/or completion of a car rental agreement. Breakdowns offered include mileage charges, rental, drop charges, tax, collision, P.A.I., gasoline, and so on. Transactions can be credit card charges or cash.

Transactions interface with the general ledger system, in which only the charged sales interface with the accounts receivable system. Reports include the Summary of Credit Card Charges, Vehicles Out Summary, Master Vehicles Listing, and Bad Accounts List.

The fixed asset system allows the monitoring of long- and short-term lease arrangements. Depreciation is automatically charged out by straight line or declining balance each month to produce a fixed assets report showing the new book value.

A version of this product is available for the PDP-11 computer.

Price: \$5000 - \$10,000

Contact: Nigel Harris
(613) 829-8888

HARRIS COMPUTER SYSTEMS
16 Credit Union Way
Nepean, Ontario K2H 8R6
Canada

EMDA Super Car Rental and Control System

Operating System: VMS

Keywords: • Accounting • Automotive • Inventory
• Order entry

This modular system for car rental agencies having from 100 to 5000 cars can run with one person entering all information or can be expanded to a completely on-line, real-time system with CRT terminals and slaved printers at each check-out or check-in station. The system provides complete car control; printed customer rental agreements; on-line check-in; dispatch, ready-line, and garage and maintenance controls; reservations; car selection at check-out; and instant status check of the cars. EMDA is a complete system that ends with a daily business report and can then be interfaced to existing accounting systems.

Modules may be purchased separately. For large installations, EMDA runs on multiple MICRO-11s linked in a local area network. For small installations, the system can run on a single MICRO-11.

A version of this product is available for the PDP-11 computer.

Price: \$8000 - \$45,000

Contact: Edwin J. Stevens
(818) 795-5991

EMDA INC.
77 N. Oak Knoll #104
Pasadena, CA 91101

EMIS (Equipment Management Information System)

Operating System: CICS, VMS

Keywords: • Information management • Inventory
• Maintenance

This comprehensive fleet-management system reports on equipment, inventory, fuel, repairs, finances, preventive maintenance, and shop productivity; identifies vehicles and personnel with good and bad MPG; tracks all the detailed data needed for day-to-day operation; and summarizes key cost and performance items for management.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: John Gorman

(305) 832-3799

INTEC SYSTEMS INC.

400 Australian Avenue

West Palm Beach, FL 33401-9990

FLEET™

Operating System: VMS

Keywords: • Cost accounting • Financial analysis
• Maintenance

Distribution media: 9-track 1600 bpi magnetic tape, TU58 DECtape II cartridge.

FLEET develops a complete analysis of the operating costs of a fleet of motor vehicles, heavy construction equipment, manufacturing machinery, or other units having either an odometer or an hour meter. The package also issues preventive-maintenance reminders, based on a set of 99 user-defined parameters.

The package accumulates a period's total costs by cost categories and by vendor and simultaneously accumulates the total of the individual cost occurrences by cost categories for each specific unit. Individual fuel, repair, or cost vouchers are entered at random and according to any user-defined frequency or period. An individual unit's accumulated miles or hours can be entered with each cost voucher or once at the end of the period.

For reporting purposes, units can be subdivided into logical groups for closer operating cost comparisons.

A version of this product is available for the PDP-11 computer.

Price: \$4000 - \$7300

Contact: Nathan I. Lieberman

(812) 479-6951

EVANSVILLE DATA PROCESSING CORP.

1010 S. Weinbach Avenue, P.O. Box 2469

Evansville, IN 47714

Flight Watch

Operating System: VMS

Keywords: • Aeronautics/aerospace • Inventory • Maintenance
• Scheduling

Flight Watch is a complete aviation management package for corporate flight departments, fixed-base operators, charter and commercial operators, as well as regional airlines. Flight Watch includes aircraft maintenance; inventory management; a scheduling system for passengers, aircraft, and crew; a charter quote and billing system; departmental financial and operational reports; and a complete set of general accounting packages for FBOs.

The maintenance system features aircraft status and maintenance-due reports, maintenance cards, inspection lists, and a history report of scheduled and unscheduled maintenance. The maintenance system also includes a subassembly and parts transfer system, rotatable parts inventory, and current information on all ADs and SBs.

The scheduling system features automatic trip and crew scheduling, trip tickets and flight log processing, charter quotes, and billing. Management reports include charter trip analysis, audit of trip changes, scheduling status, gar/aro requirements, crew examination requirements, and daily status — crew/aircraft, aircraft utilization, pilot currency, pilot time, and flight history.

A version of this product is available for the PDP-11 computer.

Price: \$14,000 – \$45,000

Contact: Ben D. Farmer, President
(404) 452-7654 or (800) 241-6805

ASCO FLIGHT WATCH, INC.
3066 Mercer University Drive
Atlanta, GA 30341

Flightmaster VAX/VMS

Operating System: VMS

Keywords: • Aeronautics/aerospace • Telecommunications

Distribution media: RX01, TU58 DECtape II cartridge.

This enhanced user interface accesses the Official Airline Guide Electronic Edition (OAG EE). The following OAG EE functions are accessed by the VT100 alternate keypad keys: fares and schedule displays, information and assistance, and user comments.

Normally, the user must enter special codes and symbols to access the data base. Flightmaster/VAX, however, uses the alternate keypad of the VT100 or VT200 terminal to select the desired function. The user need not remember the codes associated with each function. Copyrighted information retrieved from the OAG EE can also be stored in a file for later access. Flightmaster/VAX stores the OAG EE log-in code

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and password for the user to automate the log-in procedure. In addition, the telephone number is automatically dialed through the DF02-AC or DF03-AC autocall modem, so that the user need not remember the phone number. The system easily interfaces DIGITAL's ALL-IN-1 Office Menu product.

A user mode is provided so that future OAG EE functions can be accessed. A command key allows frequently used commands to be prestored and later recalled with a single keystroke. DIGITAL will not provide support and cannot guarantee the accuracy of the Official Airline Guide Electronic Edition.

Refer to SPD #A4.00.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$1250

Contact: Consult your local DIGITAL sales office (see Introduction).

K-Squared System

Operating System: VMS

Keywords: • Information management • Inventory
• Maintenance

This turnkey computer system is dedicated to the total control of equipment management from parts inventoried to mechanic labor and from vehicle maintenance history to fuel control. The system integrates and maintains all the information from itemized details to broad summary reports and is available to the common carrier, private carrier, utilities, air lines, cities, and municipalities.

A version of this product is available for the PDP-11 computer.

Price: \$15,000 - \$180,000

Contact: Steve Fischer
(609) 924-2500

GELCO MAINTENANCE SYSTEMS
Research Park, 32 Wall Street
Princeton, NJ 08540

RAFT (Revenue Accounting for Truckers)

Operating System: VMS

Keywords: • Accounting • Cost accounting
• Information management • Payroll

RAFT, developed for the short-haul and long-haul trucking company, consists of the Revenue Accounting (Probilling), Vehicle Equipment Costing and Maintenance, General Ledger and Financial Statements, and Payroll modules.

The Revenue Accounting module uses the probill as entry to the system and updates both receivables and various statistics, including customer history, employee performance, and traffic flow. This module also produces weekly invoices and monthly statements.

Probills are retained on an open-item basis and are paid either on an individual or a weekly basis. Statistics are also produced for delivery efficiency upon entry of the probill "pink" (delivery copy).

A version of this product is available for the PDP-11 computer.

Price: \$5000 - \$10,000

Contact: Nigel Harris, President
(613) 829-8888

HARRIS COMPUTER SYSTEMS
16 Credit Union Way
Nepean, Ontario K2H 8R6
Canada

TAPS (Transportation Accounting Packages)

Operating System: VMS

Keywords: • Accounts receivable • Billing • General ledger
• Sales and marketing

Distribution media: 9-track 1600 bpi magnetic tape, RL02.

This system takes care of the accounting functions for the trucking company — from free-form invoicing through state reporting — and includes accounts payable, general ledger, accounts receivable, miles and gallons reporting, owner-operator settlement programs, and sales analysis.

A version of this product is available for the PDP-11 computer.

Price: \$10,000 - \$20,000

Contact: Anthony J. Ruggeri
(314) 644-4050

AUTOMATED INFORMATION INC.
6710 Clayton Road
St. Louis, MO 63117

Transportation/Airline/Airport Management Information System

Operating System: VMS

Keywords: • Accounting • Information management
• Service industries • Statistics

Menu driven and modularly designed for sectional add/delete, the airport MIS system provides on-line and over-the-counter sales and billing information for charter, commuter, ramp fuel and services, flying school records, engineering and aircraft maintenance, and hangar and space rental of airport facilities. In addition to all financial data, MIS detail is maintained on all resident information throughout the system and can be reported in any format. Although designed for the aviation industry, this system has applications in other segments of the transportation sector. MIS interacts fully with the Armadale business system and is programmed in Pascal II.

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A version of this product is available for the PDP-11 computer.

Price: \$4500 - \$10,500

Contact: Michael G. Sifton
(416) 477-8000

ARMADALE SYSTEMS INC.

Toronto Buttonville Airport

Markham, Ontario L3P 3J9

Canada

Utilities



Robert V. Eckert Jr./The Picture Cube

ACRSTS (Automatic Control Rod Scram Timing System)

Operating System: VMS

Keywords: • Data collection • Nuclear

Distribution medium: 1600 bpi magnetic tape.

ACRSTS, designed for nuclear utilities' General Electric boiling water reactors, includes a front-end microprocessor hardware module that connects to the control-rod-drive drift signals in the control-rod-drive scram panel. Scram timing data is automatically collected during a planned or unplanned single-rod or full-core scram and sent to the utility's VAX through an RS232 connection. Once in the VAX, an extensive set of application programs is automatically initiated that updates historical data bases, prints out the latest scram time information (in a form suitable for regulatory compliance), and performs many other housekeeping tasks previously done by hand. About 25 to 30 displays are included in the system.

Price: \$50,000

Contact: Robert N. Lutman
(408) 227-7342

NUCLEAR SOFTWARE SERVICES, INC.
14125 Capri Drive, Suite 7
Los Gatos, CA 95030

BARCS

Operating System: VMS

Keywords: • Accounts receivable • Billing • General ledger
• Report writer

This system bills and prepares reports. The system generates reports for management, operational, and regulatory purposes, including cost of service studies.

Billing, in six cycles spaced throughout the month, serves approximately 35,000 customers: 15,700 metered customers and 19,300 flat-rate customers. Although residential metered customers are billed monthly, the bills are based on meter readings obtained every other month. Industrial and commercial customers' bills are based on a monthly meter reading. The program can be easily modified for a quarterly billing cycle.

Customer inquiries can be handled quickly and easily. The operator inputs the customer's account number, name, or service address. If the exact name or address is unknown, an approximation permits the operator to scroll through the files to find the correct customer.

Accounts payable, payroll, and general ledger systems have been developed, taking into consideration the unique aspects of a regulated water utility. The accounts payable, payroll, and billing programs are interfaced with the general ledger, eliminating possible errors.

A version of this product is available for the PDP-11 computer.

Price: \$6995 - \$25,000

Contact: Hank Somerall

(717) 569-5733

EASTERN SYSTEMS MANAGEMENT, INC.

1585 Commerce Drive

Lancaster, PA 17601

CMDS (Computerized Mapping and Diagram System)

Operating System: VMS

Keywords: • Electrical • Engineering • Mapping

CMDS meets the special mapping needs and budgetary constraints of small and medium-size utilities and their consultants. The system is adaptable to most geographic bases.

The layers of geography, such as roads, lakes, subdivision, and so on, are selected by the user. The user develops symbols for plotting items, such as road signs, electrical utility lines, protective devices, transformers, poles, switches, and capacitors. The user also selects the scale of each map. Subdivisions can be digitized from original plats and fitted into the base maps. Finally, the user can develop work order drawings, including instructions to crews.

The Distribution Primary Analysis (DPA) data can be created by CMDS and can reside in the mapping data base (only one data base to maintain).

CMDS requires a tablet digitizer and a CalComp-compatible plotter in addition to a computer.

A version of this product is available for the PDP-11 computer.

Price: \$27,500

Contact: Walter G. Scott

(314) 576-7727

SCOTT & SCOTT CONSULTANTS, INC.

1180 Toreador Drive

St. Louis, MO 63141

COMIT (Communications Management Information Tool)

Operating System: VMS

Keywords: • Cost accounting • Statistics
• Telecommunications

This cost allocation/network and traffic analysis package for telephone systems provides call detail by extension, cost center, department, and company, using the latest AT&T rates. COMIT has extensive network management and traffic statistics capabilities, which include usage reports by area code and exchange, comparison of existing WATS, FX, and DDD to other common carriers — MCI, SPRINT, SBS, and others

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— to determine the least-cost facilities for placing the calls, and a breakdown of traffic by hour/day/month. COMIT also includes exception reports, such as high-cost/long-durations calls, high-volume call reports to selective numbers, and searches on specific numbers, plus a complete directory service. COMIT can store up to 800,000 call records, depending on the configuration, and can produce complete billing statements as an option. The stand-alone COMIT will work with any telephone system and can also be used under a full service bureau arrangement.

A version of this product is available for the PDP-11 computer.

Price: \$5000 – \$18,000

Contact: Steve Anderson
(616) 949-9360

PROFESSIONAL COMPUTING RESOURCES, INC.
985 Parchment S.E.
Grand Rapids, MI 49506

DECCDR

Operating System: VMS

Keywords: • Billing • Cost accounting • Data collection
• Telecommunications

Memory required: 2MB. Distribution media: 9-track 1600 bpi magnetic tape, RL02.

This management tool, used in controlling telecommunication cost, collects and prices outgoing telephone call data received from a Bell Dimension PBX® with an attached Station Message Detail Recorder (SMDR) unit. The priced data is used to generate Cost Allocation Traffic Management reports, which provide the basis for evaluating the use and adequacy of the existing telephone network.

DECCDR features:

- Data collection from the PBX/SMDR unit through an EIA RS232C interface. The call data consists of date records delimiting a day's activity, call records defining the characteristics of individual telephone calls, and monitor records displaying informational messages.
- Call pricing according to industry-standard algorithms. Local flat rate, message unit, direct distance dialed, wide-area telephone service, foreign exchange, and tie-line calls are priced. Discounts are applied by time and day of week.
- Cost allocation reports assign the cost of telephone service to the organizational entities incurring them, for the purpose of analysis and control. DECCDR recognizes facility, department, division, cost center, and extension organizational levels. In addition to tracking costs by organizational unit, cost allocation reports can be generated by account code and authorization code.

- Traffic management reports provide the basis for traffic studies to determine how the telephone system is being used and how efficiently it is performing. That data can be used as a guide in developing cost-saving network configurations.
- A user interface that provides extensive help facilities. Documentation includes an installation guide, a user's guide, and an installation certification procedure.

Bell Dimension PBX® is a registered trademark of American Telephone and Telegraph Co.

Refer to SPD #A3.49.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$12,700

Contact: Consult your local DIGITAL sales office (see Introduction).

DPA (Distribution Primary Analysis)

Operating System: VMS

Keywords: • Electrical • Engineering • Simulation

DPA is an on-line family of interactive programs for the engineering studies associated with planning, designing, and operating electrical distribution systems. DPA features a permanent data base that stores electrical and physical parameters of the system; on-line editing, including on-line switching, that permits the engineer to simulate almost any operating condition; analysis programs that provide voltage levels, unbalanced current flow, line losses, line loading, fault currents, and capacitor placement; single-line diagrams of the feeders that may be plotted from the DPA data base; and DPA options that include a system to extract data, using a tablet digitizer and menu, and the software to plot feeder single lines.

A version of this product is available for the PDP-11 computer.

Price: \$27,500

Contact: Walter G. Scott
(314) 576-7727

SCOTT & SCOTT CONSULTANTS, INC.
1180 Toreador Drive
St. Louis, MO 63141

DTM (Distribution Transformer Management)

Operating System: VMS

Keywords: • Electrical • Engineering • Simulation

DTM is a family of five on-line interactive programs. The transformer model may be used to simulate almost any banking arrangement, such as line-to-ground single-phase, open wye, open delta, and combination single-phase/three-phase. The analytical model uses the transformer models to determine loading levels, demand losses, energy losses, and loss-of-life probability. The load model simulates a variety of loading

cycles and can impose the resultant demand requirements on the analytical model (hourly, daily, weekly, or annual). The energy interface model obtains customers and energy usage by class of service through transformers from customer billing records. The energy interface model then imposes that data on the analytical model. The economic model interfaces with the analytical model to determine present worth of a transformer configuration, based on costs over its life. Costs used in the model include investment, interest, installation, removal, replacement, demand losses, energy losses, and loss of life.

Utilities use DTM to answer such engineering/economic questions as what sizes and types of transformers should be stocked, how bids should be evaluated, what the best sizes are for a particular installation, what the loads are on existing transformers, and when a transformer should be replaced.

DTM also includes the files and interface software to transmit transformer sizes, customers, energy usage, and spot loads to the Distribution Primary Analysis (DPA) data base.

A version of this product is available for the PDP-11 computer.

Price: \$750

Contact: Walter G. Scott
(314) 576-7727

SCOTT & SCOTT CONSULTANTS, INC.
1180 Toreador Drive
St. Louis, MO 63141

Economic Optimization of Distribution Losses

Operating System: VMS

Keywords: • Electrical • Engineering • Simulation

This all-inclusive system models the major components of a distribution system over a selected time frame, such as 10 years; analyzes the components to isolate technical losses (demand and energy); computes the cost of losses, using marginal demand and energy prices; enables the engineer to reduce losses through alternative corrective actions, such as adding capacitors; and economically evaluates the construction and loss costs for the alternatives (annual costs and present worth of annual costs).

This system consists of a load model to derive load and loss duration factors, a station power transformer model, a primary and secondary system model (a special version of DPA), a distribution transformer model, a construct cost model, and economic analyses.

A version of this product is available for the PDP-11 computer.

Price: \$7500

Contact: Walter G. Scott
(314) 576-7727

SCOTT & SCOTT CONSULTANTS, INC.
1180 Toreador Drive
St. Louis, MO 63141

Electrical Contracting

Operating System: VMS

Keywords: • Accounting • Electrical
• Information management • Service industries

Electrical Contracting provides payroll — certified and joint industry board reports — accounts receivable, accounts payable, a purchase ordering system, a job costing and control system, billing, general ledger, inventory control and analysis, sales analysis, and word and list processing.

A version of this product is available for the PDP-11 computer.

Price: \$2000 — \$20,000

Contact: Andrew Yasenchak
(201) 231-9400

UNITRONIX DATA SYSTEMS, INC.
50 County Line Road
Somerville, NJ 08876

Electrical Repair and Paging

Operating System: VMS

Keywords: • Accounting • Electrical
• Information management • Service industries

This program provides accounts receivable, a data base of customers, personnel, contract billing, inventory sales and analysis, job scheduling, billing, job ticket repairs analysis, job installations control, quotation handling, department cost and analysis, sales analysis, job costing, word and list processing, accounts payable, general ledger, and payroll.

A version of this product is available for the PDP-11 computer.

Price: \$2000 — \$20,000

Contact: Andrew Yasenchak
(201) 231-9400

UNITRONIX DATA SYSTEMS, INC.
50 County Line Road
Somerville, NJ 08876

EUBA (Electrical Utility Billing and Accounting)

Operating System: VMS

Keywords: • Accounting • Electrical • Inventory • Payroll

EUBA is a complete, interactive system designed for electric utility companies. The system includes a comprehensive billing system that encompasses all aspects of producing bills, making adjustments, keeping statistics and history, reporting, and transformer loading. The system also includes general ledger, financial statements, payroll, accounts payable, inventory, a P.O. system, estimating, work order processing, and costing.

The software conforms to AMEU accounting practices and regulations.

A version of this product is available for the PDP-11 computer.

Price: \$16,000 - \$25,000

Contact: Nigel Harris, President
(613) 829-8888

HARRIS COMPUTER SYSTEMS

16 Credit Union Way
Nepean, Ontario K2H 8R6
Canada

General Ledger System

Operating System: VMS

Keywords: • Financial planning • General ledger
• Telecommunications

This system provides financial statements in a variety of formats for telecommunications and telephone companies. Accounts are established with an account number, account name, and financial statement code that controls the format for profit and loss and balance sheet reports. Budget amounts and prior-year comparisons can be entered. The system can also produce supporting schedules and a source cross-reference.

The General Ledger System can optionally interface with the Payroll, Vehicle Ledger, Accounts Payable, and Work Order systems.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Paul Jorgensen
(206) 456-3535

ALLIED DATA
P.O. Box 2406
Olympia, WA 98507

INFOTRACE-E™**Operating System:** VMS**Keywords:** • Data base management • Electrical

Memory required: 0.25MB. Distribution media: magnetic tape, RC25.

This automated circuit trace and switching system, written in FORTRAN-77, enables electric utility engineers to trace an electrical circuit from any specified point to another. The system speeds tracing and switching functions, ensures the validity of distribution information, eliminates duplication of effort found in traditional tracing and switching operations, and permits examination of various circuit trace and switching alternatives.

INFOTRACE-E runs as an application to Synercom's INFORMAP® II automated mapping/facilities management software, adding the capacity to retrieve a designated circuit or circuits from the INFORMAP II data base, perform tracing and switching operations, review the results of those operations on a graphics display screen, and generate reports describing the results of those operations.

INFOTRACE-E permits the user to identify a starting point and any number of stop points on a specified connected circuit and to trace the paths among those points. That provides the user with a display of the traced network and an ordered file having the required links to the INFORMAP II data base, thus allowing interface to such programs as Westinghouse's CADPAD system.

INFOTRACE-E also aids the INFORMAP II user in validating and modifying the data base. Also, selected data base attributes of the conductors and equipment along a traced path can be modified.

Price: \$20,000**Contact:** Sales Department
(713) 240-5000

SYNERCOM TECHNOLOGY, INC.

10405 Corporate Drive

Sugar Land, TX 77478

MLF (Microarea Load Forecast)**Operating System:** VMS**Keywords:** • Electrical • Engineering • Graphics

This family of on-line interactive programs provides a definitive short- and long-range load forecast for planning distribution systems. The forecast is for discrete, small areas, or cells. MLF is based on the socioeconometric parameters that dictate future load levels, such as land use, zoning, population, income, and the correlations between population and commercial/industrial electrical needs.

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The user controls the forecast and variables. The variables include the quantity, size, and year of initiation of cells; residential, commercial, industrial, and institutional consumer classification; city center, urban, suburban, and rural zones; the vacancy level in relation to saturation; the population of people for each dwelling; energy factors of kWh/acre by consumer class; and demand factors of kW by consumer class.

MLF includes the software to form the data base through forms and screen-formatted input or by extracting land use from the zoning maps with a tablet digitizer and menu. MLF also includes the software to transfer the forecasted demands and growth rates directly into the Distribution Primary Analysis (DPA) data base for analysis and planning.

MLF can be modified to meet special needs at software consulting rates.

A version of this product is available for the PDP-11 computer.

Price: \$950

Contact: Walter G. Scott
(314) 576-7727

SCOTT & SCOTT CONSULTANTS, INC.
1180 Toreador Drive
St. Louis, MO 63141

Moste System

Operating System: VMS

Keywords: • Accounting • Billing • Networking
• Telecommunications

This system gives users complete control over their telephone system and its expenses. Controllers and accountants can use the accurate, verifiable reports to allocate telephone expenses back to individuals, departments, or cost centers and divisions. Communications people are given all the necessary tools to configure their telephone systems' PBX, outside lines, and data communications network. The modular design of the system allows the collection of data from any PBX and accommodates users with 100 to 32,000 telephone extensions.

The system also features telephone directory reports and an optional Reseller's module for clients who would like to bill users of their telephone system. Moste's flexibility allows the configuration for multiple telephone systems.

Clients begin with a thorough training class at their installation site and are invited to attend free periodic seminars at our office. Quarterly updates to the Moste System's pricing data bases keep clients up to date with the latest AT&T, Common Carrier (such as MCI and SPRINT), and Bell operating company (such as NYNEX and PACTEL) telephone rates. Communications Analysis will provide custom programming for special situations.

A version of this product is available for the PDP-11 computer.

Price: \$14,000 - \$19,000

Contact: Ray Haarstick
(617) 875-7300

COMMUNICATIONS ANALYSIS CORP.
100 Fountain Street
Framingham, MA 01701

Oil and Gas System

Operating System: VMS

Keywords: • Accounting • Financial analysis • Management
• Petroleum

The Oil and Gas System, developed by Pittsburgh National Bank, provides a flexible, cost-effective, integrated system for oil and gas exploration, drilling, and production companies. Audit trails and control are integrated to the systems. Validation criteria ensures accurate and efficient processing.

Major components of the Oil and Gas System include lease information and control, accounts receivable interface, accounts payable interface, general ledger interface, oil and gas revenue, reserve analysis, and economic evaluation.

Price: \$35,000 - \$50,000

Contact: George F. Cooper
(412) 355-2868

PITTSBURGH NATIONAL BANK
Financial Systems Group
Fifth Avenue and Wood Street
Pittsburgh, PA 15222

ORS (Outage Reporting and Analysis System)

Operating System: VMS

Keywords: • Electrical • Engineering

This family of on-line interactive programs performs three functions. ORS establishes a data base containing details about all distribution outages, such as location of caller, time (received, off, dispatched, on), dispatched to, device tripped and location, priority (sickness, dairy, and so forth), weather, portion of system affected, cause, and number of consumers (from DPA). ORS prints a summary of outages at any time: month to date, calendar year to date, previous 12 months to date. Finally, ORS creates special printouts on which the user selects the time period (dates), location, and one of the following: cause, device, system, weather. The other variables may be sorted at the discretion of the user.

The Outage Reporting System is used to determine reliability levels, pinpoint areas with high outage rates, locate devices with a high failure rate, determine probable emergency crew needs under various weather conditions, assess efficiency of emergency procedures and personnel, and increase quality of service at lower cost.

This system can access the (DPA) data base to obtain customers out of service and lost energy.

A version of this product is available for the PDP-11 computer.

Price: \$1950

Contact: Walter G. Scott

(314) 576-7727

SCOTT & SCOTT CONSULTANTS, INC.

1180 Treador Drive

St. Louis, MO 63141

PBX/Facilities Management

Operating System: VMS

Keywords: • Billing • Data collection • Telecommunications

Distribution media: 9-track 1600 bpi magnetic tape, RL02.

This application package tracks and helps control telecommunications costs and produces billing for second-party users. The system has the following features:

- P/FM can be used with multiple Private Branch Exchanges (PBXs) of mixed types. Types supported are the PBX with direct connect option (feature packages 4, 7, 8, 10, 12, and 15) through the attached Station Message Detail Recorder (SMDR) unit (RS232 port), as well as CENTREX through a 94A.
- Call records are priced as they are received, thus providing the ability to generate an invoice in real time. Charges for nontelecommunication transactions, such as building services rendered and equipment rentals, may be included with telecommunication charges on the invoice.
- P/FM specifies the type of call charges by price, cost, or estimated cost. Although calls are priced using AT&T Communications rates for consistency, calls are costed by specific vendor rates.
- P/FM prices most North American calls through the vertical and horizontal mileage tables. Other locations, such as Hawaii, Puerto Rico, and the Virgin Islands, are priced by bands. International calls (non-North American) are priced by the country they are placed to, independent of air mileage. All calls can be discounted over five daily time periods. Different rates can be charged for holidays.

- P/FM provides for a set of reports that include peg count, call cost, call duration, hundred call seconds, call blockage, queued calls, condition code, peak day, cost allocation (summary by company, department, cost center, or extension), and frequent call tracking (summary by country, area code, exchange, or specific phone number).

VAX DATATRIEVE Version 2.1 and VAX Common Data Dictionary Version 2.3 are prerequisite.

Refer to SPD #A4.38.xx when requesting further information on this product from your local DIGITAL sales office.

Price: \$18,500

Contact: Consult your local DIGITAL sales office (see Introduction).

RADWASTE

Operating System: VMS

Keywords: • Inventory • Nuclear • Scheduling
• Warehousing

Distribution media: magnetic tape, RL02.

This FORTRAN program tracks radioactive waste through on-site storage and shipment to the burial site. The user can define the container type, physical form of waste, storage location, activity, and nuclide content and activity. Automatic spectral analysis is permitted through Canberra's SPECTRAN-F or APOGEE programs. Manual nuclide entry is also permitted, as well as file maintenance and editing.

Designed in accordance with 49 CFR 173 and 10 CFR 61, this program generates inventory reports, Reg. Guide 1.21 semiannual reports, and weekly and periodic summary reports. As with all Canberra software, human interfacing has been provided to ensure ease of use and minimal user training.

The program uses the INGRES Relational Data Base management system.

A version of this product is available for the PDP-11 computer.

Price: \$50,000 +

Contact: Robert Loesch
(203) 238-2351 ext. 352

CANBERRA INDUSTRIES, INC.

One State Street

Meriden, CT 06450

REACT

Operating System: VMS

Keywords: • Accounting • Credit • Electrical
• Information management

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REACT is a complete data processing system designed for electric utility companies. The system includes a complete consumer billing system (approximately 500 programs), payroll, general ledger, accounts payable, materials and supplies, and a complete work order system, including maintenance of continuing property records. For rural electric co-ops, the system also includes a complete capital credit system. This software was designed specifically for electric utilities and fully conforms to all REA and DOE accounting standards, as well as to known PURPA regulations.

In addition, the system offers as options a full selection of management information applications, including financial forecasting, vehicle analysis, bad-debt service order management, and a full distribution engineering system that includes transformer load management, voltage-drop calculations, short-circuit analysis, TVA reporting, outage reporting, transportation, utilicorder, and service order management.

A version of this product is available for the PDP-11 computer.

Price: \$35,000 - \$250,000

Contact: H. V. Bonds, Jr.
(803) 799-4094

DIGITAL SYSTEMS, INC.
P.O. Box 12
Columbia, SC 29202

TASCAL

Operating System: VMS

Keywords: • Nuclear • Project management • Scheduling

Distribution media: magnetic tape, RL02.

This useful scheduling tool for managers at nuclear facilities allows list generation for tasks to be executed, overdue tasks, and completed tasks. The design allows for separate files for each department or a general file that contains all the tasks for the facility. Written in FORTRAN and supported by menu-driven techniques and simple user dialog, this program provides a powerful tool for the manager concerned with time management and the scheduling of activities.

A version of this product is available for the PDP-11 computer.

Price: Available upon request

Contact: Robert Loesch
(203) 238-2351 ext. 352

CANBERRA INDUSTRIES, INC.
One State Street
Meriden, CT 06450

Tele-Track, Tele-Bill

Operating System: UNIX* (Berkeley)

Keywords: • Accounting • Billing • Simulation
• Telecommunications

Distribution media: 5¼" diskette, 9-track magnetic tape, cartridge.

The TelAccount telephone accounting and billing systems are UNIX* based and considerate of the user. They enable businesses to allocate telephone expenses accurately and to determine optimum configuration of telephone services. Additionally, a full set of customized reports help users to successfully manage their communications network. Tele-Track reports include both detail and summary reports at company, division, department, and station (extension) levels; a full spectrum of traffic analysis reports, such as trunk utilization by trunk group and destination, busy-period reports in both graph and tabular form; and cities-called reports. A simulation package is available to assist in determining optimum trunk configurations for future growth. The Tele-Bill (resale) accounting application includes automatic client billing and cost control features, along with complete traffic analysis reporting. A project activity report function makes the system a viable alternative for professional service organizations, such as law firms, that require project accounting and billing services.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP-11 computer.

Price: \$3000 +

Contact: Dick Vento, Vice President, Sales and Marketing
(415) 499-8881

TELACCOUNT, INC.

7 Mt. Lassen Drive, Suite A-250
San Rafael, CA 94903

UTIANA-IMPRS Utility Analysis System

Operating System: VMS

Keywords: • Data base management • Data collection
• Facilities management • Query facilities

This system records up to three years of monthly power, gas, water, and telephone information; summarizes total information by building number and meter number; provides complete on-line inquiring/processing; allows for easy interactive reporting of all files; is completely menu driven; uses security passwords to control access; provides automatic master file backups; and performs extensive on-line editing and balancing.

A version of this product is available for the PDP-11 computer.

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Price: \$2500

Contact: Elvin E. Smith or Forrest E. Weddle

(913) 782-8544

RUF CORP.

1533 E. Spruce

Olathe, KS 66061

Utility-11

Operating System: VMS

Keywords: • Billing • Maintenance • Report writer

This comprehensive billing and reporting package is designed to provide on-line inquiry into customer information and to provide flexibility in maintenance of utility customer information, water rates, electrical rates, meter readings, and sewer/sanitation rates.

A version of this product is available for the PDP-11 computer.

Price: \$1850 - \$8000

Contact: Ronald R. Kirchhoff, President

(806) 293-4286

KMK ENTERPRISES, INC.

701 Broadway, Suite 204

Plainview, TX 79072-7353

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Job Cost	○ ●	98
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MMS (Marketing Management System)	○ ●	1520
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Mistress/32	○ ●	1038
MMS (Micrographics Management System)	○ ●	1039
Officeman	○ ●	1364
Officeware®	○ ○	1365
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PER-FORM™ (Personalized Form Letters)	○ ●	1367
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BOMS (Bills of Material System)	○ ●	1239
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CAPE-PACK (Computer-Assisted Packaging Evaluation)	○ ●	439
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Datacode® Bill of Material	○ ●	1248
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DNC-11 (Direct Numerical Control Package)	○ ●	1253
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- Accounting, 2-157. *See also* Arts;
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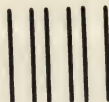
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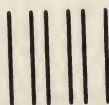
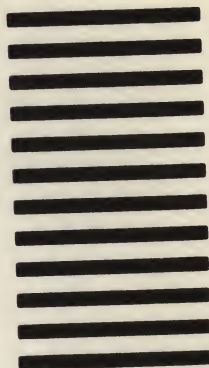
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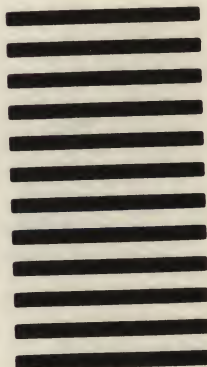
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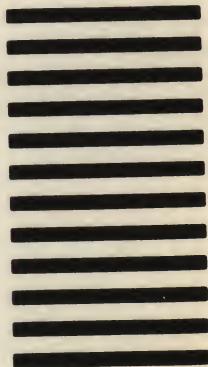
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